

## HALITOSIS – BAD BREATH

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*Translated from Flemish (courtesy of PreViser UK Ltd).*

Everyone wants fresh breath. However, many people have to cope with halitosis (bad smelling breath), which has negative effects on both work and family life. Most people with halitosis are not aware of the problem as it is difficult to evaluate one's own breath objectively. People around you may be aware of it, but the taboo that surrounds bad breath means that they rarely comment on it. As a result, people often suffer with this problem for far too long.

Halitosis usually occurs from the mouth and not - as many people believe - from the stomach. Therefore this is where the cause should first be sought. Experience shows that after a proper diagnosis, treatment is usually simple.

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### 1. What causes halitosis?

Your mouth, nose and throat are full of bacteria. These bacteria usually live in an ecological balance and have more positive than negative effects on humans. They survive on waste products in the oral cavity, such as food, dead epithelial cells (the cells from the inside surfaces of your mouth and throat), and components of saliva.

As with our human metabolism, the resulting waste-products have to be excreted. The anaerobic bacteria (bacteria which live without oxygen) produce chemicals known as volatile sulphur compounds (VSC), as a by-product. These often creates breath which smells. The anaerobic bacteria are found in places inaccessible to oxygen, such as in spaces between the gums and teeth – known as 'pockets'.

### 2. Where does halitosis come from?

#### • *The stomach? Very rarely.*

People often mistakenly think that bad breath comes from the stomach, which leads to many unnecessary gastro-intestinal investigations and medication. In reality, the stomach is only the culprit for a few patients, whose closing mechanism between the stomach and oesophagus is not functioning properly. In this situation there may be acid reflux that can irritate the wall of the oesophagus and create inflammation, of which halitosis is a symptom.

#### • *The pharynx? Rarely.*

Pharyngitis (a sore throat) usually has a bacterial origin. The bacteria may produce odorous compounds. Because the pharynx is connected to the nose and mouth, pharyngitis can lead to halitosis. This only

happens rarely and the bad breath is usually transient.

- *Tonsils? Not as rare.*

When your tonsils are inflamed, they swell up. Bacteria may live on the enlarged surface area, which can lead to halitosis. The removal of your tonsils is not recommended as way of preventing halitosis, however. This is only really a solution for frequent infections. First, you should consult an ear, nose, and throat specialist. Small stones (calcified bacteria) from the tonsils at the back of the mouth may end up spreading a very unpleasant odour. Fortunately, the stones rarely cause long-term bad breath.

- *Teeth? Fairly often.*

Teeth are often the cause of halitosis. This is particularly the case for patients with deep caries (dental decay), poor fitting fillings, crowns, bridges etc. In all these spaces, anaerobic bacteria and food debris may hide, creating unsavoury breath. A regular check-up at the dentist and good oral hygiene is essential. In addition, dentures should be thoroughly cleaned each day to avoid bad-smelling breath. Carelessly cleaned false teeth are a major risk factor for fungal infections.

- *Gingivitis and periodontitis? Frequently.*

Untreated gum disease (gingivitis) can sometimes lead to periodontitis. This is inflammation of the gums that affects the bone around the teeth. It leads to a loss of the bone that supports your teeth and creates deeper gingival pockets (spaces between the teeth and gums). The gum pockets provide anaerobic bacteria with the opportunity to multiply undisturbed. They are safe, sheltered in the gingival pockets, where the toothbrush cannot access them. Periodontitis is usually painless, but can be identified by bleeding gums.

- *Tongue? Usually!*

The tongue has a very large surface area. A huge number of bacteria settle in the grooves and recesses on your tongue: more are found here than anywhere else in your mouth. Along with food and flaking epithelial cells, the bacteria attach to the surface and become visible as a white-yellow coating that

can be especially thick on the rear of the tongue. The presence of these bacteria and their nutrients is an ideal starting point for halitosis.

### 3. What else can lead to halitosis?

Apart from the typical causes of halitosis described above, there are several factors that may promote the development of bad breath.

#### *Garlic and onions.*

Some compounds found in onion and garlic get into the bloodstream. They then travel to the lungs where they can be exhaled in the breath. Once the materials are cleared away from the body, bad breath disappears spontaneously, but for some people the effect of these nutrients are still being felt up to two days later.

#### *Smoking:*

Cigarette smoke is inhaled through the mouth and throat and sucked into the lungs then is exhaled via the same route. Some of these substances stick to the mucous membranes (the moist lining of your mouth, nose and throat). This means your breath can smell of smoke for hours to days later. This is smokers' breath.

#### *Dry mouth:*

A dry mouth will lead to halitosis much more readily than a mouth which is well-supplied with saliva. This is because the substances that trigger halitosis are usually diluted, dissolved and washed away in the saliva. With less saliva, the VSC compounds are easily released to form an unpleasant smell. A lack or reduction of saliva production is called xerostomia. As we age, we all usually produce less saliva as a natural process. However, there are also other factors that promote a dry mouth, such as certain medications (anti-depressants, sedatives), breathing through the mouth instead of the nose, snoring, smoking, coffee, alcohol, and stress.

#### *Morning halitosis:*

Upon waking, many people suffer from bad breath. The decrease in saliva production during the night creates a stagnant

environment. Sometimes we unknowingly sleep with our mouth open, making it even drier. These factors promote the development of halitosis.

#### *Eating patterns:*

Irregular eating and an empty stomach can lead to bad breath. Therefore it's important to eat regularly. There can be three to four hours between meals. A snack can do wonders!

## 4. What general health issues can affect your breath?

The most frequently found conditions that may create halitosis are diabetes, trimethylaminuria, liver and kidney failure and some hormonal effects.

- **Diabetes:** In poorly-controlled diabetes, certain molecules form in the blood which also can freely enter the lungs. This leads to a rather fruity fragrance.
- **Trimethylaminuria** is a rare inherited disorder in which all body fluids - including the breath - have a fishy odour.
- **Liver failure** leads to the accumulation of ammonia. It reaches the lungs through the blood stream and causes exhaled breath to develop the smell of rotten eggs.
- **Renal (kidney) failure** leads to an increased level of urea in the blood. This is also reflected in the exhaled breath which is described as having a fishy smell or a smell of rotting apples.
- Finally, some women may suffer from halitosis due to changes in hormone levels just before ovulation or the onset of menstruation.

However, these causes of halitosis are rare.

## 5. Halitophobia, or imaginary breath odour

Some people may think they have halitosis, when actually they don't. They may suspect this because they have a bad taste in their mouth, although poor taste is not always linked to bad breath. Other people misinterpret the behaviour of others: being

offered chewing gum or mints; people who stand at a distance or accidentally rub their noses ... it can all lead to halitophobia, an imaginary breath odour.

Halitophobia can have a major influence on some people's social life and emotional state. A real halitophobic patient can often be helped with a logical approach. The negative results of some measuring devices which give immediate feedback on fresh breath, can also help allay their fears.

## 6. What can you do?

The key to fresh breath is the fight against anaerobic bacteria.

#### *Tongue Scraping:*

There are different kinds of tongue scrapers, which vary in shape, size, material and hardness. No single optimum tongue cleaner exists: the choice should be based on the individual. Ask your dentist for advice.

The technique is the same for all types:

- Stick out your tongue, hold it with a gauze / cloth / towel and pull it out as far as possible.
- Breathe naturally through your nose
- Place the tongue scraper as far back as possible on the tongue with a slight pressure to flatten the tongue.
- Pull the scraper gently but quickly forward. Ensure that full contact is made with the tongue.
- Repeat this movement five times. In between, the scraper should be rinsed.
- Make sure the tongue is brushed over the entire width. If you have a narrow tongue cleaner, you may need to scrape the side parts separately.
- Do this twice a day.

A common problem is the gag reflex. This is most commonly experienced when you start to use a tongue scraper. If you feel discomfort, don't start at the back of the tongue, but gradually scrape a little further back each time you try the technique. Over time, the gag reflex should decrease. It can also help if you wet the tongue cleaner with warm water, or if you don't scrape on an empty stomach.

### *Brushing teeth:*

When your mouth is healthy, your gums should be pink and feel firm. They should not bleed when you brush or touch them, as this can be a sign of inflammation (gingivitis). To prevent infection, the teeth should be free of plaque. Therefore, brush your teeth correctly using a manual or electric toothbrush. Make sure you clean all surfaces (outside, inside and biting surface). It is also important that you also use floss or inter-dental brushes between your teeth. Ask your hygienist to help you with your correct brushing technique.

### *Regular monitoring at the dentist.*

Having and maintaining regular monitoring at the dentist is essential for a healthy mouth. We will check your mouth for caries, poorly fitting fillings, crowns or bridges and periodontitis, and remove the existing plaque. We help and motivate you to achieve good oral hygiene. If you have severe periodontal damage, we'll probably recommend the opinion of a specialist periodontist.

### *GP and/or specialist.*

Sometimes the cause of halitosis is not in the mouth, but elsewhere in the body. Your doctor or specialist can help you.

## 7. What can temporarily offer fresher breath?

The solutions mentioned below provide a way to temporarily achieve fresher breath. They don't tackle the real cause, however, but will simply camouflage it. This means that bad breath returns once the product has been used.

### *Gum and mints:*

These products can contain substances such as mint, aniseed and chlorophyll which temporarily suppress bad breath. The effect is usually lost after a few minutes.

### *Mouthrinses:*

Some mouthrinses contain substances such as mint, aniseed and chlorophyll. As with gum and mints, however, bad breath will soon return.

Mouthwashes based on products such as chlorhexidine, essential oils, fluorides and/or

cetylpyridiniumchloride possess an antibacterial property. Combined with good oral hygiene, they slow down the multiplication of bacteria. Since they have some side effects such as discoloration of the teeth and possible taste disturbances, they are usually only recommended to be used for limited periods.

### *Mouthrinses containing zinc,*

Adding zinc compounds to mouthrinses gives them the capacity to remove the volatile sulphur compounds (VSC) that are formed by the bacteria. As a result, VSCs don't get into exhaled air, which temporarily offers fresher breath. Again, however, the effect is temporary.

### *Antibiotics:*

Is there an antibiotic that solves halitosis? The answer to this question is a clear 'No'. Antibiotics temporarily eliminate bacteria in the mouth, but after a while (usually after a few days), the bacteria simply return – and may become resistant to the antibiotic. Many useful bacteria are also removed by the antibiotics, and the halitosis-producing bacteria may get the chance to multiply undisturbed, making the problem worse!