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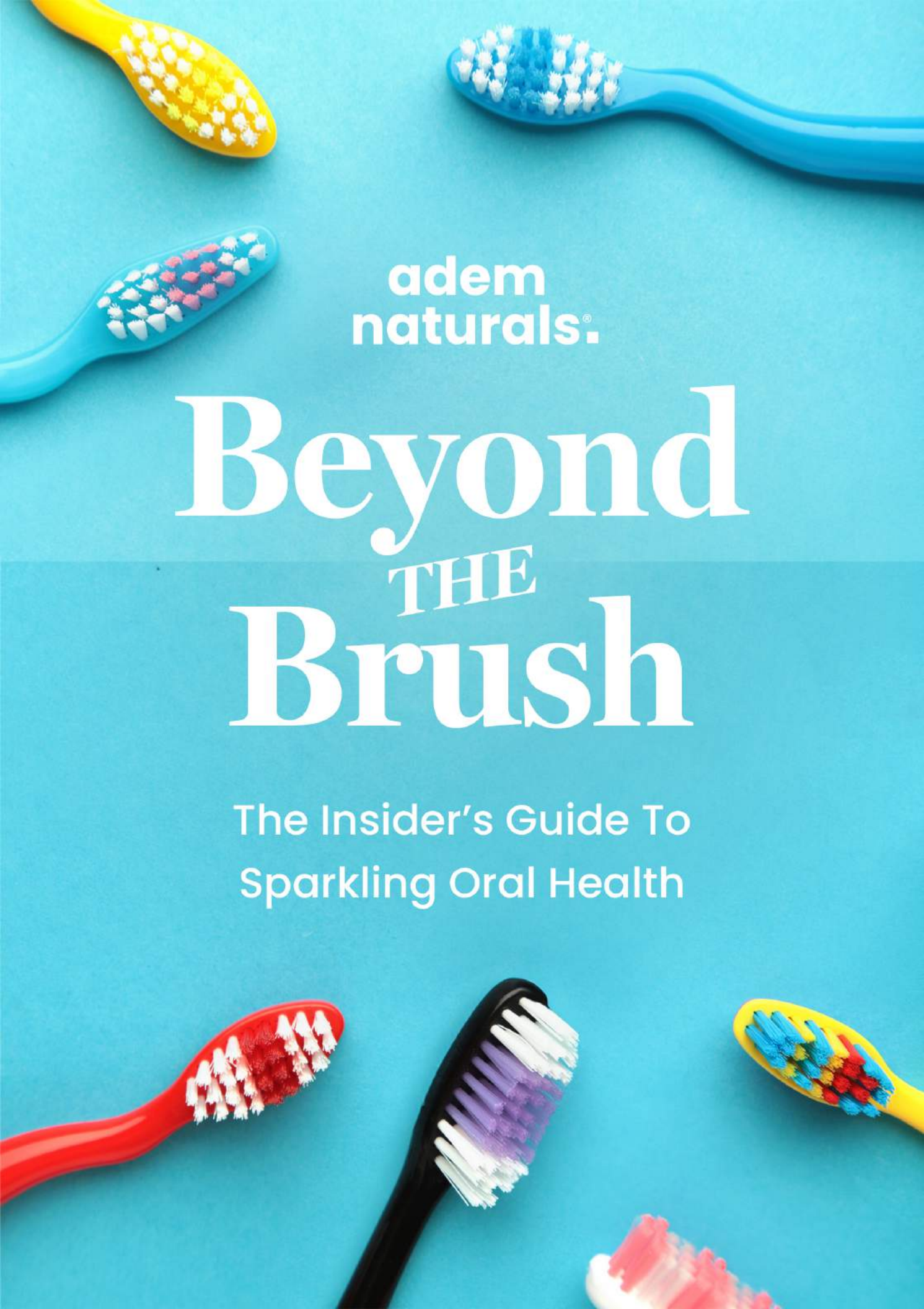
Beyond THE Brush

The Insider's Guide To Sparkling Oral Health



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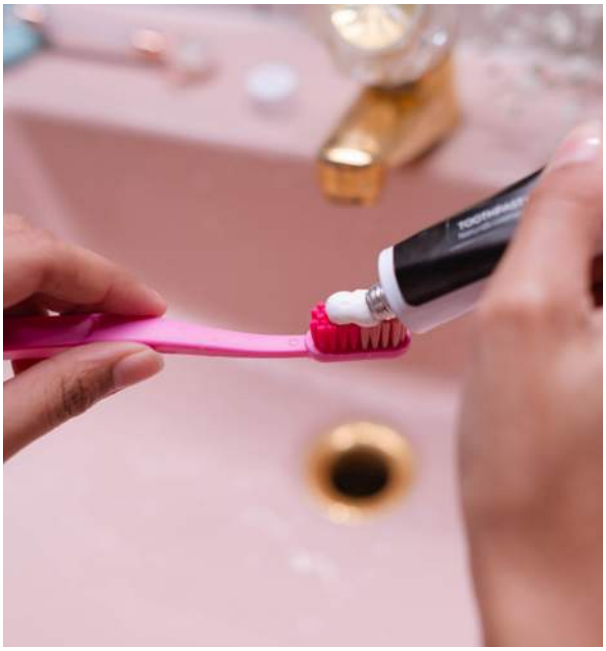
Introduction

Good oral health is important. It dictates so much about our lives. And it's not just having a confident, white smile or the ability to chew food. Oral health is a window into your overall health. The condition of your teeth, gums, and mouth affects the rest of your body.

The Body/Mouth Connection

We don't tend to think of our mouths as the gateway to the body, at least not in the medical sense. However, it's the entry point for two of our most important systems –– the digestive tract and respiratory system. The problem is the bacteria that thrive on your teeth, gums, tongue, and other tissues within the mouth.



Most of the billions of bacteria that thrive in your mouth are harmless. Some are even beneficial, like those that make up a healthy gut biome. However, some of those bacteria can be very dangerous.

Mouth Bacteria Statistics

- The average adult has between 50 and 100 billion bacteria in their mouth at any given time.
- The average American has around 650 different species of bacteria living in their mouth, but there can be up to 1,000 different species.
- A single tooth can host over 500 million bacteria.
- Bacteria begin colonizing the mouth at birth.
- The oral microbiome is the initiation point for digestion, but also plays an important role in systemic health.
- The most common bacteria in the mouth include lactobacillus and Streptococcus mutans (the primary cause of cavities). Others include Poryphyromonas gingivalis, Staphylococcus, Streptococcus mitis, Granulicatella, Gemella, and Veillonella.

Normally, your body's defenses are enough to handle dangerous bacteria, particularly when combined with good oral hygiene. But when your hygiene is lacking or when oral health declines for any reason, bacteria levels can skyrocket, leading to serious oral health problems, like tooth loss and gum disease.

That bacterial overgrowth doesn't just affect your mouth. New studies have linked it with a wide range of other diseases, including cardiovascular disease, endocarditis, pneumonia, and sepsis.

Conversely, some diseases (and their treatments) can also affect your oral health. For instance, osteoporosis is linked to tooth loss and periodontal bone loss. Diabetes is linked to poor gum health, and poor oral health and Alzheimer's disease are also linked.

The Challenge of Maintaining Good Oral Health

Given the importance of oral health to overall health, it makes sense that you would want to protect it. That can be challenging, particularly in today's society. Sodas and other sweetened beverages, acidic coffee and tea-based drinks, unhealthy foods, and the prevalence of smoking and vaping –– these are just some of the threats to your teeth, gum, tongue, and mouth overall.

The age-old advice to brush your teeth twice a day, floss daily, and visit your dentist twice a year is a great starting point. These form a solid foundation for good oral hygiene and overall oral health.

However, there's more you can do! In this eBook, we'll cover important oral health tips, hacks, and know-how so you can protect your entire body.

Ready to discover better oral health and better overall health?

CHAPTER 1:

Increase Your Saliva, Increase Your *Health*

One key to good oral and overall health? Lots of spit. That's right – if you want to increase your health, you need to increase your saliva production. If that sounds a little weird, keep reading!

Saliva: So Much More Than Spit

Saliva is the liquid produced by glands in the mouth. However, it's more than just water. It's a specialized lubricant that helps keep the mouth's various tissues (teeth, gums, tongue, cheeks, etc.) protected.

There's more to it than that, though. If you look deep into your saliva, you'll discover that it's full of specific enzymes that keep potentially harmful bacteria in check. It also helps to remineralize the enamel on your teeth, neutralizes harmful acids, improves digestion, and even helps signal the brain when your stomach is full through the production of leptin via the mouth's salivary glands.

A clinical study published in the Journal of Natural Science, Biology, and Medicine found that "Saliva is a complex fluid, which influences oral health through specific and nonspecific physical and chemical properties. The importance of saliva in our everyday activities and the medicinal properties it possesses are often taken for granted. However, when disruptions in the quality or quantity of saliva do occur in an individual, it is likely that he or she will experience detrimental effects on oral and systemic health."

Saliva Facts

- The average person produces between .5 and 1.5 liters of saliva per day.
- Saliva is 99.5% water.
- Saliva includes proteins and mineral salts.
- Some of your saliva is actually mucus.
- Saliva also includes antibacterial compounds.
- Enzymes in saliva help protect teeth and aid in the digestion process.
- Saliva plays a complex role in the mouth, including:
  - Defending teeth
  - Remineralizing teeth
  - Restoring damaged soft tissues
  - Lubricating the teeth, gums, tongue, and cheeks
  - Aiding digestion
  - Killing dangerous microbes

So, if you're struggling with dry mouth, it's more than just discomfort. You're also dealing with an overgrowth of bacteria and likely have weakened enamel, too. Extrapolating from this, severe dry mouth could allow bacteria to overgrow to the point that it becomes a threat to your entire body!

Fighting Dry Mouth

Given the importance of saliva, it's essential to fight back against dry mouth. Drinking water and limiting your consumption of sugary beverages or alcoholic beverages is a good start. However, there's more you can do! Here's a quick list of the most effective options:

- Make sure to sip plain water throughout the day.
- Consider using a humidifier if your home or office is particularly dry.
- Use xylitol gum or mints.
- Limit caffeine.

Of these options, using xylitol gum or mints might be the most effective. That's because xylitol has been shown in multiple studies to reduce the bacteria in your mouth responsible for causing cavities, particularly Streptococcus mutans. These bacteria thrive on sugars, and since xylitol is a natural sweetener but does not contain sugar, it helps eliminate the food source for those dangerous bacteria.

You'll also want to supplement with something that can help restore balance to your mouth's flora. In the same way you take a probiotic for your gut health, ProvaDent includes a combination of enzymes and probiotics that help reduce oral biofilm.

Why Xylitol?

Throughout this book, xylitol is recommended in place of cane sugar, other natural sweeteners, and even sugar replacements like aspartame. This is because xylitol brings a unique combination of characteristics and capabilities to the party.

- Xylitol has almost half the calories of table sugar (2.4 calories per gram compared to 4 calories per gram).
- Xylitol also naturally enhances saliva production, allowing your body's natural defenses to fight back against bacteria, remineralize teeth, and more.
- Xylitol is a natural sweetener found in many fruits and vegetables. It is not synthetic.
- Xylitol does not spike blood sugar or insulin and has a very low glycemic index (7 compared to 60 or 70 for table sugar).
- Xylitol can increase calcium absorption in the body.
- Medical studies show that xylitol can reduce bad bacteria levels in the mouth by up to 75% while giving good bacteria a needed boost.

CHAPTER 2

3 Tips for *Naturally* Whiter Teeth

We all want clean, healthy, white teeth. If yours are discolored, you'll want to keep them hidden. You won't smile as widely, and you'll feel less self-confident.

Of course, there's no shortage of whitening options on the market today. These run the gamut from specialty treatments in your dentist's office to questionable home remedies and things like color-matching serums that don't do much of anything.

The good news is that you probably don't need to spend a fortune on whitening strips or go through trial and error with home remedies. There are simple, effective ways to help you achieve naturally whiter teeth. Below, you'll find three of the most effective options.

1. Avoid Stiff or Abrasive Brushes

Many people assume that the best way to clean their teeth is to get in there and scrub them with a stiff-bristled toothbrush. That makes sense on one level, but the truth is that you're

doing more harm than good. Every pass with an abrasive or hard bristled brush damages your enamel. The more you scar it, the worse your teeth will look.

The reason is simple – bacteria use those scars to create footholds on your teeth. It collects here and then begins to calcify, becoming tartar. It also secretes acid, which further erodes your enamel and starts the process of cavity creation, while darkening your tooth's natural color (which is never pearly white to begin with – most teeth are light yellow, gray, or even bluish naturally).

Tips to Help Choose the Right Toothbrush

So, if hard-bristled brushes are off the table, what should you choose? How do you even pick the right brush in the first place? Here's a quick guide to get you started.

- Choose a soft-bristled toothbrush to help prevent damage from over-zealous brushing or too much pressure.
- Check out the bristles. You want a brush with

angled or multi-layered bristles to help you clean the different surface heights in your mouth.

- Multi-layered bristles help deep clean your teeth and gums if you feel that softer bristles aren't getting the job done.
- Electric toothbrushes have rapid vibration and rotation rates that allow you to use less pressure to get your teeth and gums cleaner than ever. Most electric toothbrushes come with soft bristles installed on their heads.
- If you're still struggling with choosing the right toothbrush, speak with your dentist to explore your options and get their professional opinion on what will be best for your specific oral health needs.

2. Reduce Your Consumption of Acidic Foods and Beverages

Most of us can't start our day without at least one cup of coffee. Or maybe you prefer to get your caffeine through sodas.

Whatever the case, your chosen beverage is highly acidic. That acid begins eating through your enamel and darkening your teeth. Sugary beverages also feed the unbeneficial bacteria in your mouth, helping them thrive. Limit your intake of these beverages as much as possible.

Acidic foods do much the same thing as coffee. Most processed foods, grains, sugary foods, high-protein foods and supplements, lemon juice, apple cider vinegar, and fermented foods like sauerkraut are high in acid. Pineapples, tomatoes, most dairy products, and even apples and grapes contain acid that can etch your enamel and lead to a less-than-bright smile.

That doesn't mean you should skip all of these, though. Whole, minimally processed foods (fruits, grains, and vegetables) are essential for good health. After eating something acidic, make sure to rinse your mouth with clean water.

Replacement Options for Better Oral Health

Protecting your enamel is vital – you never get another layer. So, choosing the right beverages is important. With coffee, soda, and even many juices off the table, what are your options? Here are a few choices that not only help you avoid enamel erosion, but can help improve your oral health in many cases.

Dairy Milk

Dairy milk is technically acidic, but only mildly so. It comes in with a pH of around 6.5 to 6.9, with 7 being neutral. In addition, dairy milk contains plenty of calcium, which can help buffer the acidity and fight further erosion.

Plant/Nut Milk

Can't drink dairy? Perhaps you've gone plant-based. Almond milk is a good alternative to dairy milk, and most formulations are slightly alkaline. Soy milk is also slightly alkaline. However, oat milk is slightly acidic, and coconut milk can go either way, depending on how it's made. Cashew milk is slightly acidic. When choosing plant/nut milks, look for:

- Milks fortified with calcium
- Low or no added sugar content (unsweetened)

Still Water

We've already touched on how sipping water during the day can help improve dry mouth. However, it's also a good replacement for acidic drinks like coffee or soda, at least as long as you drink still water and avoid carbonated water. Carbonated water has a pH of 3 or 4, which is enough to erode tooth enamel. Most public water in the US also contains fluoride, which helps to strengthen your natural enamel.

Tea

Many people assume that tea is acidic, and it can be. However, some types are only mildly acidic, and their antioxidants make up for that. Generally speaking, black and oolong teas have more acid than other options. White and green teas have less acid content. Don't assume that tea is safe for your teeth because it's white or oolong, though. Other factors also

affect its acidity, including additives like sugar or dairy, and even how the tea is brewed.

Don't Smoke or Vape

Finally, if you smoke or vape, quit now. This is essential for your overall health, but also for your oral health.

Smoker's smile, or smoker's mouth, is a well-established phenomenon affecting people who smoke. It can also affect those who use smokeless tobacco to some degree. It involves the following:

- **Staining** – While nicotine is colorless, it turns yellow when exposed to oxygen. When it coats your teeth, it can be absorbed through the pores in the tooth structure, deeply staining them and turning your smile a dingy yellow that steadily darkens over time.
- **Plaque and Tartar** – Smoking doesn't just discolor your teeth directly. It also increases the production of plaque and tartar, which further tarnishes your smile, while also forming cavities and potentially leading to gum disease, tooth loss, and even more dangerous conditions.
- **Bad Breath** – Smokers almost always suffer from halitosis (bad breath) caused by bacterial overgrowth and dry mouth.

But what about vaping? Yes, vaping does discolor teeth in much the same way as smoking, although more slowly. The effects on your smile will also vary depending on the amount of nicotine in the vape and the type of e-liquid used. Those who vape also suffer from bad breath due to dry mouth.

If you want whiter teeth and a healthier mouth, don't smoke or vape.

CHAPTER 3

The 3 Main *Reasons* You Have Bad Breath

Dragon breath. Death breath. Rotten breath. We have so many names for this condition, but the scientific term is “halitosis”.

This is more than bad breath caused by eating strongly smelling foods –– it’s a medical condition that can cause social ostracization and can even be a sign of underlying diseases.

But what causes halitosis in the first place, and what can you do about it other than covering it up with breath sprays or mints? The good news is that there are underlying causes of your bad breath, and most people can treat it.

In this chapter, we’ll cover the three most common reasons you might have bad breath.

Gum Disease

The most common cause of bad breath is gum disease. As plaque and tartar build-up around your teeth and across your gum line, bacteria levels also rise. As bacteria live and die, they release gasses that can smell like sulfur or rotten eggs.

Gum disease does much more than cause bad breath, though. It can lead to gum recession, tooth loss, and sepsis, and is even implicated in cardiovascular disease and other major health threats.

The good news is that gum disease is relatively easy to treat, at least if it is caught during the early stages (gingivitis). It's also easy to prevent.

- First, make sure you're visiting your dentist twice a year for deep cleanings and checkups. This will help remove cement-like tartar from your gumline and teeth.
- Second, make sure you're brushing correctly. Use gentle, circular strokes and only brush with a soft-bristled toothbrush. Avoid abrasive toothpastes, as well.
- Third, brush your teeth at least twice a day for at least two minutes per session.
- Fourth, make sure you floss at least once per day. This helps remove plaque and food debris from between your teeth. Note – you should floss BEFORE you brush.

The Stages of Gum Disease

When most people hear the words "gum disease", they immediately picture tooth loss, but the truth is that this disease has multiple stages. Understanding them can help you improve your oral health.

What Is Gum Disease?

Gum disease is technically called “periodontitis”. It can ultimately be a serious disease that affects not just your oral health, but your overall health. If you develop periodontitis, you’re also at a higher risk of developing dementia, heart disease, or even stroke. Preventing that requires understanding the stages of periodontitis and how to fight them.

Gingivitis

Gingivitis is technically a gum disease in its own right, but it can lead to periodontitis. It’s marked by swollen, red gums due to a lack of proper hygiene. Regular dental visits, combined with proper brushing and flossing, can reverse gingivitis, and help prevent the development of periodontitis in the first place.

Mild Periodontitis

At this stage, those red, swollen gums begin to pull away from your teeth. Bone loss around your teeth also begins. Plaque, tartar, and bacteria can become trapped in pockets around the base of your teeth where it’s impossible to reach with your toothbrush or dental floss. Periodontitis can still

be reversed at this stage, although it will require significant dental cleaning.

Moderate Periodontitis

This stage is marked by even more bone loss around the teeth and increased gum and soft tissue damage from bacteria. At this point, your gums will become sore and tender. Tooth loss is still preventable at this stage, but it requires the intervention of your dentist and a rigorous oral health regimen.

Severe Periodontitis

At this point, the bone surrounding your teeth has eroded to the point that you may be experiencing loose teeth or even tooth loss. Your gums are bleeding and infection has set in, producing pus at the gumline. That can lead to chronic bad breath, but the disease can also lead to infections in the bone or blood and other negative health outcomes.

White Coating on the Tongue

If you struggle with chronic bad breath, head for the nearest mirror. Now, stick your tongue out and look at it. Do you see a white coating? It may be most prevalent or thickest toward the back of the tongue. If so, you've found another cause of bad breath.

Usually called “white tongue”, that coating is made of dead bacteria, skin cells, and other debris being trapped between the papillae, which are finger-like projections that cover the surface of the tongue. While it might be gross to think about, it’s usually temporary and something you can take care of on your own.

What causes white tongue? A range of different factors might be at play here. Below, you’ll find some of the most common causes:

- **Dehydration** – If you’re not getting enough fluids, it can lead to dry mouth, which encourages bacteria in your mouth to multiply. This then leads to a thicker debris mat on your tongue.
- **Dry Mouth** – Dry mouth has similar symptoms to dehydration (and dry mouth can be a symptom of dehydration). However, it is a distinct condition in which the mouth’s salivary glands don’t produce enough saliva. This is commonly seen in patients taking specific medications or going through radiation therapy.
- **Alcohol** – Excessive use of alcohol can lead to a reduction in saliva, as well as an overgrowth of bacteria due to an increase in sugars and the effects of alcohol itself on your mouth’s bacteria.
- **Smoking/Vaping** – Smoking and vaping both reduce the effectiveness of your saliva, encouraging white matting to develop on your tongue.

- **Vitamin Deficiency** – If you're low on iron or B12, it can manifest as a white coating on your tongue.

Treating white tongue is a simple enough process for most people. Quitting smoking or vaping is one step. Ensuring that you're getting enough water during the day is another. Reducing your alcohol consumption, as well as limiting sugary drinks can also help.

Removing the white buildup is also easy enough. You'll need a tongue scraper and a mirror, as well as running water.

Gently scrape the surface of your tongue to remove the white buildup, then rinse the scraper under running water. Repeat this process until all the white material is removed. Combine regular tongue scraping with good oral hygiene and taking an oral probiotic to help prevent it from returning.

ProvaDent's unique formula of beneficial bacteria, vitamins, minerals, and enzymes helps support beneficial bacteria in the mouth and can reduce or eliminate the bacteria causing white tongue.

Sinus / Gut Issues

Finally, sinus or gut issues could be contributing to your bad breath. Let's break these down separately.

Sinus Issues and Your Breath

If you have a sinus infection, the sinuses will release foul-smelling mucus down the back of your throat. The only treatment for this is to cure the sinus infection. Flushing your sinuses can help reduce the volume of bad bacteria present but serious infections may need antibiotics.

Understanding Sinus Infections

Sinus infections usually stem from a backup of fluid in your sinuses. As the fluid builds up, bacteria thrive and breed. The underlying culprit is often a cold virus, but other factors can also lead to an infection in your sinuses, including smoking, structural abnormalities in the sinuses, and a weakened immune system.

Symptoms of Sinus Infections

Most of us associate sinus infections with pain and pressure in the head and face, mucus production, and even fever. However, these infections may not be quite so blatant. Symptoms can be as simple as a runny or stuffy nose, and can also include a sore throat, coughing, postnasal drip, and, of course, bad breath.

The Link with Bad Breath

The link between sinus infections and bad breath is mucus. Mucus that carries infection smells bad. As it runs down your throat from your nose, it meets the air you inhale and

exhale. That allows the odor from the infection to transfer to your breath.

Treating Sinus Infections

Treating an underlying sinus infection is essential to eliminating your bad breath. Antibiotics can kill the underlying bacteria, but they also kill beneficial bacteria. Flushing your sinus cavities with a neti pot is less detrimental to good bacteria in the rest of your body. Avoid taking decongestants for more than a few days, as they can make the problem worse. If you get frequent sinus infections, schedule an appointment with your doctor to determine the underlying problem.

Gut Issues and Your Breath

If your small intestine suffers from bacterial overgrowth – a condition in which "bad" bacteria multiplies and releases foul-smelling gas that causes bloating and belching – you likely suffer from bad breath. Treating bacterial overgrowth and returning your gut to a balanced state with probiotics, such as ProvaDent, can help reduce or eliminate bad breath.

Understanding Gut Health and Its Impact on Your Breath

While bacterial overgrowth is one of the most common gut-related causes of bad breath, there are plenty of others. These range from GERD to kidney disease, and each requires a different treatment strategy.

Bowel Obstruction

Think of your bowel as a one-way street. Like city streets, accidents can block the flow of traffic. When this happens in your bowel, everything stops moving. It then begins to ferment, which produces gases that travel up through the stomach to the esophagus and out of your mouth.

Reflux/GERD

The stomach produces acid that helps you break down the food you eat. However, that acid can be problematic. People with acid reflux or GERD (gastroesophageal reflux disease) produce excess acid that can move up the esophagus from the stomach. They bring a sour odor with them, which can be smelled on the breath.

Kidney Disease

Chronic kidney disease can sometimes cause bad breath as a side effect. If your breath smells “fishy” or “ammonia-like” and you haven’t eaten fish or shellfish, make an appointment with your doctor to discuss kidney health.

Stomach Ulcers

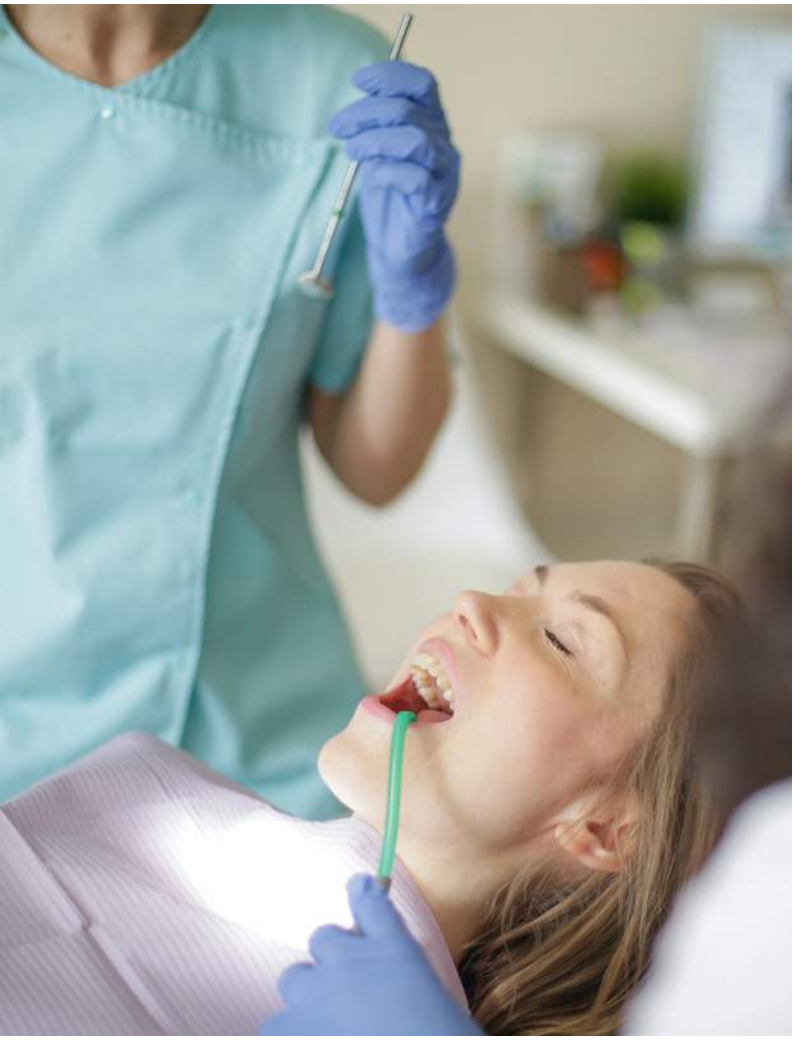
Ulcers in the stomach are caused by bacteria – H. pylori to be specific. Several studies have found a link between chronic bad breath and the presence of stomach ulcers, although the exact nature of that connection is unclear.

CHAPTER 4

Do You Have Bad Breath?

Quick Hacks to Check and Identify the Source!

Do you have an off taste in your mouth? Did you catch a whiff of something foul after you coughed or when you finished speaking? It could be bad breath.



The challenge, of course, is that it can be very hard for us to determine whether we have bad breath on our own. Does that mean you need to enlist the aid of random passersby?

No. Rather than recruiting people to help, you can tell if you have bad breath on your own. The quick hacks we discuss in this chapter will also help you determine the underlying cause of your bad breath and then treat it!

Hack #1

Our first hack is simple. Just lick the back (underside) of your wrist, then wait 10 seconds. When the time's up, smell the area you just licked. If it smells fine, then your breath is good. If it smells foul, you have some work to do!

Hack #2

The next hack is best performed following the first one and is designed to help you tell if the bad breath is from your tongue or your gums. For this, you'll just need to take a cotton swab, put it as far back on the top of your tongue as you can, and wipe forward. Wait for five seconds, and then smell it. How does it smell?

Hack #3

After the tongue test, you should check your gums. This hack is just as simple as the previous two. Take some floss, run it between a couple of back molars, and then smell it. Is it fine? Great. Does it stink? You have some gum issues.

What to Do about Bad Breath

The hacks above should have helped you pinpoint the source of your bad breath. Depending on where that is, you have a couple of options to address your dragon breath.

Option 1:
If the smell is from your tongue, chances are good that you need to scrape it regularly. You may also need to hydrate more. If you smoke or vape, quit now. Coffee and soda will also exacerbate this problem.

Option 2:
If the smell is from your gums, it means you need to improve your oral hygiene game and make an appointment with your dentist. Brush at least twice a day for two to three minutes at a time and floss before you brush.

CHAPTER 5

Oil Pulling: How to Get *the Most* from It

Want to improve your oral microbiome and kill bad bacteria? Oil pulling might be just the thing. But what is oil pulling and how do you do it to maximize effectiveness?

Oil pulling offers considerable benefits. However, many people don't perform it correctly, which reduces the benefits they see. In this chapter, we'll talk about what it is, why it's beneficial, and how to do it.

What Is Oil Pulling?

While oil pulling might sound like some new health practice, the truth is that it dates back thousands of years. It's a traditional Ayurvedic treatment that involves swishing edible oil in your mouth, around your gums, and between your teeth.

You should not use just any edible oil. Omit things like corn oil or vegetable oil. What you want is coconut oil. It's naturally antibacterial, antifungal, and antiviral (thanks to the lauric acid it contains). It's also safe for your mouth and your oral microbiome.

What Does Oil Pulling Do?

Oil pulling is good for removing harmful bacteria in your mouth. When you swish it thoroughly, the oil binds with bacteria, allowing you to spit it out and come away with a cleaner, healthier mouth.

Coconut oil also supports good bacteria, giving them a leg up over the types that cause bad breath and cavities. Plus, it's able to reduce inflammation, which can improve the condition of your gums.

How to Pull Oil

Oil pulling isn't a particularly complicated process, but there are some specific things you should do to get the most from it.

- First, make sure that you use coconut oil. Other oils don't offer the same combination of properties and capabilities.
- Second, you need to swish it for the right amount of time. Shoot for 10 minutes twice daily. You need at least 20 minutes per day to see the benefits oil pulling can provide.

You can combine this with brushing your teeth if you want (after flossing and brushing). It can even take the place of using mouthwash since coconut oil is moisturizing, while alcohol-based mouthwashes are drying.

- Third, make sure you keep the oil in motion. Forcibly swish it around in your mouth and between your teeth. The goal is to coat every part with oil to capture as much bacteria as possible.

What Oil Pulling WON'T Do

While oil pulling is an effective treatment for bacteria and bad breath, there are things that it just won't do. Understanding these will help you make informed decisions when it comes to your oral health.

Whitening

There's a myth out there that oil pulling will help whiten your teeth, especially if you use coconut oil. This is untrue. No medical studies support teeth whitening through oil pulling.

Detox

Some people claim that oil pulling will pull toxins out of your gum tissues and blood. Again, this is untrue. It will detox your mouth by removing dangerous bacteria, but oil pulling does not remove toxins from the blood or tissues. Your liver is responsible for removing toxins.

Other Health Claims

You'll discover a wide range of increasingly outrageous health claims about oil pulling, particularly if you use coconut oil. Understand that most of these are false. Yes, oil pulling can help treat gingivitis and bad breath. Yes, it can help balance your oral microbiome. However, there is no evidence that it can help treat any diseases other than those we've discussed in this chapter. Take any such claims with a grain of salt.

CHAPTER 6

The Ugly *Truth* About Cavities (Dangerous and CONTAGIOUS!)

Cavities – the word alone can conjure images of tooth pain and sensitivity, dental drills, and fillings.

They're certainly no fun.

But did you know that if you suffer from cavities, you can spread them to other people? Yes, cavities are contagious! Well, the bacteria that cause cavities can be transmitted to other people. We'll discuss what you need to know in this chapter!

What Are Cavities?

Most people think of cavities as being little more than holes eroded in their teeth. Some people assume that they're the result of food sit-

ting in place or eating too much sugar. There's some truth to that, but those are contributing factors.

Bacteria cause cavities. They do so by excreting acid that eats through the enamel and then down into the underlying dentin.

Cavity Statistics

- According to the CDC, 90% of Americans over the age of 20 have had at least one cavity.
- 25% of adults aged 20 to 64 currently have at least one cavity.
- Of people aged 12 to 19, 57% have had a cavity in their permanent teeth.
- Up to 52% of kids aged 6 to 8 have had a cavity in their baby teeth.

Untreated cavities can lead to serious consequences, including abscesses, tooth loss, problems with eating and speaking, and even sepsis in extreme cases.

Stages of Cavity Development

Cavities don't form overnight. It takes time for bacteria to start eroding your enamel. That's good news because it gives you the chance to fight back and eliminate the bacteria before it

can cause serious problems. Understanding the stages of cavity development will help you do that.

Stage 1

The first stage of cavity development is the formation of small, white spots on the body of a tooth. These are points of demineralization as bacteria goes to work eroding the enamel. While enamel might be the hardest substance in your body (harder than your bones), it's no match for the power of bacteria over time. These spots can be easy to spot on your front teeth. However, they get increasingly hard to identify the farther back in the mouth you look. It's impossible to see them on your back teeth without special mirrors.

Stage 2

The second stage is enamel decay. You'll notice that the white spots on your teeth are beginning to darken. Eventually, they turn brown. At this point, the acid is beginning to erode small holes in your teeth (cavities, or caries as they're known in the dental world).

Stage 3

Stage three is where the cavity breaches your tooth's enamel and reaches the underlying dentin. It's softer than the enamel and, as such, is much more susceptible to the acid from bacteria. You'll notice that the cavity begins to form much faster at this point. Your tooth may also become very sensitive to heat and cold.

Stage 4

After the bacteria eat through the dentin, the cavity eventually reaches the pulp, which is the innermost layer of your tooth. This is where the nerve and blood supply are located. The damage from the bacteria can cause the pulp to swell, which puts pressure on the surrounding material, which cannot expand with the pulp. That leads to pain and pressure.

Stage 5

The final stage of cavity development is the formation of an abscess. As the tooth continues to decay, the bacteria infect the root and pulp. That infection causes pus to form, creating an abscess at the base of the tooth. This can lead to severe pain and swelling, and you may notice other symptoms, including swollen lymph nodes, fever, and pain in the jaw or face. Once an abscess forms, a root canal or removal of the tooth may be necessary.

How Are Cavities Contagious?

Most people are surprised when they learn that cavities can be spread from person to person. That's because they don't think about how bacteria can spread from mouth to mouth.

Anytime you share a toothbrush (gross, don't do it!) or even kiss your partner, you exchange small amounts of bacteria if your mouth (or your partner's) isn't clean. That bacteria can

then set up house and begin eroding enamel, leading directly to a cavity that would not have otherwise formed.

How to Keep a Clean Mouth and Reduce the Chance of Spreading Bacteria

The first step is to make sure your oral hygiene routine is up to par. You should floss at least once a day (before brushing) and then brush your teeth at least twice a day for two to three minutes at a time.

Next, you'll want to do two things: break down oral biofilm (plaque that eventually becomes tartar) and create a healthy microbiome. ProvaDent's unique combination of good bacteria, minerals, and enzymes does both. It also fights Strep mutans.

You can also add ProvaFresh to your daily routine to help. This is a xylitol spray that you can use before bed or after a meal. It includes xylitol, bamboo extract, calcium, sea salt, hyaluronic acid, and peppermint oil, along with water, and can improve gum health, fight bacteria, hydrate, and add trace minerals back to create healthier teeth.

CHAPTER 7

Conquer Canker Sores with a Natural Remedy That Actually Works!

The National Institutes of Health report that up to one in 10 Americans suffer from canker sores. These are painful lesions that can appear on the gums, cheeks, tongue, and even the throat. They can be a real pain!

What Are Canker Sores?

Also called mouth ulcers or aphthous ulcers, canker sores are painful lesions that form in the mouth. They're separated into several types, including minor, major, and herpetiform canker sores (listed in increasing order of rarity).

Canker sores can be very painful and make it difficult to eat, drink, or speak. They can also take up to two weeks to heal (major sores may take up to six weeks). The good news is that you don't have to suffer with the pain and inflammation – a simple science-backed home remedy can work wonders.

What Causes Canker Sores?

Modern medicine isn't quite sure what causes canker sores. However, researchers believe it's usually a combination of different things, even within the same individual. Some of the most common causes include:

- Physical trauma
- Oral products that contain sodium lauryl sulfate
- Food sensitivities
- Allergic response to oral bacteria
- The presence of Helicobacter pylori bacteria
- Hormonal imbalances
- Stress
- Vitamin deficiencies
- In response to diseases including IBD, Crohn's, celiac, and Behcet's disease

How to Treat Canker Sores Naturally

While there's nothing that will cure a canker sore, you can take steps right at home to reduce inflammation and pain, all without using medication. Many studies have found that turmeric and hon-

ey combine to form a potent treatment for canker sores! Here's the recipe:

- 1/2 tsp. turmeric
- 1/2 tsp. honey

Combine the turmeric and honey and then apply the resulting paste directly to the canker sore. Let it sit for up to five minutes and then rinse the sore with clean water. Do this twice daily to reduce pain and inflammation. Note that this will not cure your canker sore overnight, but it will make it easier to deal with it while the sore heals.

Why honey and turmeric? Both have a long history of use in holistic medicine, and both are antibacterial. Turmeric is also a powerful anti-inflammatory, which is why supplementing with it is recommended for people with arthritis and other inflammatory diseases.

Other Treatment Options for Canker Sores

In addition to the honey and turmeric mixture we just discussed, you can use other techniques to help reduce pain and swelling. These include the following:

- Reduce stress through meditation and/or breathing techniques.

- Protect your mouth from further trauma.
- Rinse your mouth with warm salt water twice daily.
- Try to follow a healthy diet to prevent nutrient/vitamin deficiencies.
- Don't skip brushing and flossing.
- Skip mouthwashes that include sodium lauryl sulfate.

What NOT to Do with Canker Sores

Canker sores can be very painful. They can also expand in some cases, sometimes growing from small spots to cover the entire surface of the upper or lower gum or affect large portions of the inside of your cheek. Using the turmeric and honey mixture discussed in this chapter helps to shorten a canker sore's lifespan and alleviate pain, but some activities and so-called treatments can actually make them worse.

Here's what you should NOT do with a canker sore:

- Do not use alcohol-based mouthwashes.
- Do not eat spicy foods.
- Avoid drinking alcohol.
- Do not brush the sore with your toothbrush.
- Do not drink carbonated beverages.
- Avoid hard or sharp foods, like hard pretzels and chips.
- Avoid very salty or acidic foods.

CHAPtER 8

The 1 Type of *Cavity* You Can Repair at Home (and How to Do It!)

Most of us assume that having a cavity means scheduling an appointment with the dentist to have it filled. And that's usually the case.

However, there's one type of cavity you can repair at home without a dentist visit or a need for a filling. What type of cavity is this and how do you repair it?

The Cavity Type

Cavities come in all shapes and sizes. Most of them require professional care. However, if you have a superficial cavity that is completely contained within the enamel layer, you can repair it right at home. Note that if it penetrates the underlying layer (dentin), only a dentist can help.

What Is a Superficial Cavity?

A superficial cavity is one just beginning to form. Cavities form when bacteria collect on the surface of a tooth and excrete acid, which begins eating through the layers of the tooth. The outermost layer is the enamel, which protects the dentin and the pulp.

How to Heal Superficial Cavities

While the body cannot produce more enamel, you can take matters into your own hands and heal damaged enamel with special products that can remineralize the teeth. One of those is a type of toothpaste called nano-hydroxyapatite, sometimes abbreviated as HAp. This product works by applying minerals back over your teeth, which are then eventually incorporated into the tooth's structure.

Over time, they fill in small holes and other minor damage to your enamel. These products cannot regrow enamel, but they can strengthen them, reverse superficial cavities, and improve your overall health.

How to Use HAp

When using a product like nano-hydroxyapatite toothpaste, you'll want to floss and brush as usual – at least two times a day for two to three minutes per session. However, do not rinse after brushing your teeth. For remineralization to occur, the toothpaste needs to remain in contact with your teeth. If you rinse it away, that cannot happen.

CHAPTER 9

Sweet Revenge with *Xylitol*: The Cavity Killer

Humans love sweet things. Once, we indulged in fruit. Today, we've mastered the art of creating delicious confections of all types, from candies to gum and everything in between.

However, the link between sugar and poor oral health is clear. It feeds the bad bacteria in our mouths – Strep mutans – and encourages cavity development, gum disease, and more. But not all sweet stuff is the same!

Xylitol is a powerful, all-natural tool that tastes deliciously sweet but doesn't feed dangerous bacteria. We discussed it in a previous chapter, but now it's time for a deeper dive.

What Is Xylitol?

In today's world, it's natural to be leery of things that sound artificial. The dangers of artificial sweeteners like aspartame are well-established. The good news is that xylitol is completely natural. It's found in many plants and is commercially produced from corn cobs and birch bark and is technically a sugar alcohol.

Xylitol comes in low on the glycemic index (7) and has fewer calories than sugar (2.4 per gram), despite being almost as sweet. That makes it an excellent sugar substitute for those with diabetes, or anyone concerned about their overall health. Xylitol is also a powerful agent for those concerned about their oral health.

How Xylitol Helps Teeth

So, how does this natural sweetener help teeth? It offers a couple of very important benefits, which have been the subject of several important clinical studies.

1. Xylitol does not feed bacteria. Because it doesn't break down the way sugar does, it doesn't provide food for bacteria like Strep mutans. The bacteria try to consume the xylitol, but it provides no energy, essentially starving them to death. Without food, bacteria don't thrive and the population in your mouth decreases, which makes it less likely that cavities will form.

2. Xylitol increases your mouth's saliva production. Your natural saliva is one of the most important weapons in the fight for good oral health. It rinses bacteria from your teeth, contains enzymes that fight bad bacteria, and includes minerals that help to heal minor damage to your tooth enamel. Xylitol increases saliva production in the mouth,

rinsing away bacteria, strengthening your teeth, and protecting against damage by strengthening your enamel.

3. Xylitol helps increase the pH in your saliva. With a higher pH, less acid is formed. That helps strengthen your enamel and ensures that your teeth are more resistant against the bacteria that remains in your mouth. Combined with the reduction in acid-producing bacteria, this creates a more balanced oral microbiome.

How to Consume Xylitol

You'll find xylitol in a wide range of products. Xylitol chewing gum is widely available and, at least when it comes to children, is one of the most effective products for improving oral health and reducing potentially dangerous oral bacteria.

Xylitol mints are also available and may be preferable for some people, particularly adults who either do not or cannot chew gum frequently during the day. ProvaDent mints contain xylitol, along with a host of beneficial probiotics, minerals, and enzymes, and when chewed after a meal helps to increase saliva production and kill Strep mutans (the bacteria responsible for cavities).

Tips and Tricks with Xylitol

- Xylitol gum should be chewed for at least 20 minutes.
- Do not give xylitol to dogs; it's toxic to them.
- Xylitol gum is effective but may not be the right choice for those with temporomandibular joint dysfunction, who have difficulty chewing, or who work in an environment where chewing gum is disallowed, mints are the better option.
- Most adults can safely tolerate 40 g/d of xylitol. Children should consume less than 45 g/d. The recommended dose to prevent cavities is 6 to 10 g/d.

CHAPTER 10

The Weird Tongue Tool for Better *Breath*

Dealing with bad breath? It could be linked to bacteria and debris buildup on your tongue. Go to a mirror and stick out your tongue. Do you see a white buildup on it? That's "white tongue" and it can be problematic. It can also cause very bad breath.

The good news is that a weird little tool can help you remove that buildup and decrease bad breath while keeping your tongue clean and healthy-looking.

What Is a Tongue Scraper?

A tongue scraper is exactly what it sounds like –– a specialty tool designed to help people just like you remove that buildup from their tongues. They come in different shapes and sizes. Some are even built into the back of toothbrush heads, although using a standalone scraper might be the better option.

One of the most effective styles is a horseshoe-shaped version. It features two easy-grip handles and a curved piece

of stainless steel between them. Stainless steel is the best material for a tongue scraper because it won't corrode with use and leave more debris behind.

How to Use a Tongue Scraper

Using a tongue scraper isn't that complicated, but it does require a few specific steps to ensure you get as much bacterial buildup off as possible while protecting your tongue.

- Hold both ends of the scraper firmly.
- Stick your tongue out as far as you can.
- Reach as far toward the back of your tongue as you can, because that's where most of the stinky bacterial buildup is located.
- Gently but firmly pull the scraper toward the front of your tongue.
- Repeat this process several times to make sure you cover the entire surface of your tongue and get as much buildup off as possible.
- Make sure to thoroughly clean and dry your tongue scraper after every cleaning session.
- Try to clean your tongue twice a day –– once in the morning before breakfast and then again at night before going to bed. It's usually simplest to combine this with brushing and flossing. Scrape your tongue before you brush your teeth.

How to Choose a Tongue Scraper

Tongue scrapers can help you handle bad breath and improve your overall oral hygiene. However, they're not all created equal. It pays to make an informed choice here. Not sure how to choose a tongue scraper? Here's what you need to consider.

Material – The right material matters. You'll find stainless steel, silicone, copper, and plastic on the market. Of these, stainless steel is the better choice. Copper is durable but leaves a taste on the tongue. Plastic is affordable, but some types contain PVC and BPA, which can contain toxins.

Ease of Use – Make sure that any tongue scraper you choose is easy to use. That means it should be simple to reach the back of your tongue without going through contortions.

Handle Shape and Comfort – The tongue scraper should feature a handle that's easy to grip and large enough for comfort. You don't want to have to pinch it between your fingers to use it. Look for an ergonomic grip that doesn't slip.

Type – As mentioned, tongue scrapers come in several different styles. Choose the style that is easiest for you to use and that delivers the best results. For most people, that's a horseshoe shape with two handles.

Additional Features – As more people begin using tongue scrapers, manufacturers are introducing more and more features. Some of the options you have include double edges for enhanced scraping, bristles, adjustable handles, wide or narrow form factor, travel pouches, and more. There's no right or wrong answer here but beware gimmicks masquerading as features.

Tips and Tricks to Maximize Effectiveness

Never used a tongue scraper before? Don't worry. They're simple to use and very efficient. Check out the tips and tricks below to help make the process both more comfortable and effective.

- Go lightly. Remember that you're scraping your tongue, not scouring cast iron or scrubbing the grill. It's sensitive. Too much pressure can leave a lasting, unpleasant sensation.
- Repetition is your friend. Scrape your tongue two to three times to get as much debris/buildup off as possible.
- Keep it clean. Rinse your scraper after every pass over your tongue. Otherwise, you risk spreading more bacteria over areas you're trying to clean. You don't need to

worry about washing it, though. A quick rinse in warm water will be enough until you're done.

- Wash it when you finish. Your tongue scraper is in contact with dead skin cells, bacteria, and other debris. You don't want that to dry on it. Make sure to thoroughly clean it when you're done scraping every single time.
- Don't just focus on the top. Bacteria can collect on the top and sides of your tongue. You can also scrape the bottom of your tongue but be extra gentle here.

Can You Scrape a Fissured Tongue?

Fissured tongue, sometimes called cracked tongue, is a condition marked by one or more fissures on the top or sides of the tongue. These can form during childhood or adulthood. They can be related to many things, ranging from medication to malnutrition to Down's syndrome.

Fissures are more commonly seen in men, and they tend to worsen as you age. But can you scrape a tongue with fissures? Is it safe? Is it painful? What should you know?

What Is Fissured Tongue?

The American Academy of Oral Medicine (AAOM) defines "fissured tongue" as the presence of multiple small furrows or grooves on the dorsal (top) of the tongue. It's usually diag-

nosed during a routine dental examination, but sometimes patients will notice it themselves and ask their dentist about it. Most patients don't require any type of biopsy and the condition is usually benign with no symptoms and no treatment necessary.

Can You Scrape Tongue Fissures?

Yes, tongue fissures can and should be scraped. Scraping them clean may be safer and less uncomfortable than trying to brush inside the fissures with a toothbrush, too. If you have fissures on your tongue, you should spend extra time cleaning them because they can harbor bacteria and debris buildup.

Is Scraping Tongue Fissures Painful?

Some people experience discomfort from their tongue fissures, but this is usually irritation brought on by not cleaning them properly. When debris and bacteria build up within the fissures, it can irritate the surrounding tissues and make your tongue swollen and uncomfortable. Scraping the fissures clean removes debris and bacteria, helping to reduce discomfort at the same time.

What Tool Should You Use to Scrape Tongue Fissures?

You can scrape tongue fissures with any tool that works for you. It might be best to start with a stainless-steel tongue

scraper and see how it does. If it's not getting into the fissures as well as you'd like, you can switch to a bristled-style scraper. This may be necessary if your fissures are particularly deep. If you're unsure which style is right for you, speak with your dentist for a professional recommendation based on an examination of your tongue.

CHAPTER 11

Do You Gag When Using a Tongue *Scraper?*

This Weird Trick Helps!

The most common cause of bad breath is bacterial buildup on the tongue. That white stuff? That's it. It's made of dead skin cells, bacteria, food debris, and other gross stuff.

Thankfully, getting rid of it is pretty easy. You just need to practice good oral hygiene and use a tongue scraper.

Of course, scraping your tongue effectively means reaching far back toward your throat, and that can trigger your gag reflex. That's uncomfortable and it can also cause you to bite down on the scraper, while also limiting the effectiveness of your scraping.

If that sounds familiar, use this simple, weird hack to avoid gagging the next time you scrape your tongue.

The Thumb Folding Trick

Hold your tongue scraper in one hand. If you're using the style with two handles, you'll just need to pinch one handle between your thumb and forefinger, and then hook the other handle with your middle finger. It's a surprisingly effective grip!

Now, take the thumb on your other hand and fold it in against your palm. Then wrap your fingers over it and squeeze. You want to grip it tightly but not cause pain. Got it? Good.

Now concentrate on how your thumb feels wrapped in your hand while you use your other hand to scrape your tongue. You should notice that your gag reflex is minimized to at least some degree. Most people find that this allows them to scrape their tongue effectively without gagging (at least as much).

How Does It Work?

This trick works through the power of distraction. While you're focusing on the sensation in and around your thumb, your mind is less aware of what's going on in your mouth. You can use other techniques that rely on the same basic premise, including focusing on your breathing (yes, you should breathe while scraping your tongue – don't hold your breath or it might make the gag reflex stronger!).

Other Tongue Brushing Tips and Tricks

The thumb-folding trick works very well, but it's not the only option available if you're struggling to brush your tongue without gagging. It's easier than you think to clean that gunk off your tongue without heaving!

- **Go Easy** – One reason many people gag when scraping or brushing their tongues is that they apply too much pressure. Go easy with it. Pressing too hard will activate your gag reflex, particularly while scraping the back of your tongue, but it can also injure your tongue and leave it sore. A tongue that's been scraped raw is also susceptible to infection.
- **Use the Right Tool** – There's a reason manufacturers make different types of tools for cleaning your tongue. Each person should find the tool that works best for them. U-shaped stainless-steel scrapers are great for most people, but you might benefit more from a brush-style scraper. If one doesn't work great, try another.
- **Don't Use Your Toothbrush** – One important tip to help you avoid gagging while getting your tongue as clean as possible is this: don't use your toothbrush. They're designed for cleaning your teeth and gums, and even soft-bristled brushes can be too harsh for your tongue's sensitive surface. Plus, tongue scrapers are designed to do a better job anyway and can remove up to 75%

of the bacterial buildup that causes bad breath. Toothbrushes remove around 45% at best.

- **Practice Makes Perfect** – Finally, keep practicing even if scraping your tongue makes you gag a little. It's important to keep the tongue clean. You'll also find that repetition reduces your gag reflex over time. You'll eventually be able to move your scraper farther and farther back on your tongue with less problem. Note that you shouldn't scrape the very back of your tongue where the tonsillar mounds are located.

CHAPTER 12

Do You Have This Type of *Mouthwash* at Home? Throw It Away NOW!

Mouthwash is supposed to be a great tool for improving your oral health and it can be! You just need to make sure you have the right type. If you have the wrong type, stop using it and throw it away right now.

The Wrong Type of Mouthwash

You'll find a wide range of mouthwash formulations out there. Some of the most popular brands claim to kill 99% of the germs in your mouth, which sounds good, but is it true?

Unfortunately, it is true. That's exactly the problem.

What we're talking about here are alcohol-based mouthwash-es. They are very effective at killing bacteria.

You can feel it working, right? It tingles as you swish it around. It burns as it touches your sensitive cheeks and gums.

And when you spit it out afterward, your mouth feels completely purged of bacteria.

This is the issue: you need good bacteria, and these mouthwashes kill both good and bad bacteria. If you kill off most of the bacteria in your mouth, you leave an ecological niche that fast-developing types can move into and exploit. We're talking specifically about Strep mutans here, the bacteria responsible for causing cavities, which can quickly spread without beneficial bacteria in place to keep it under control.

However, it's not just about preventing cavities. Studies have shown that those who frequently use alcohol-based mouthwashes also kill off the bacteria that produce nitric oxide, which is responsible for improving blood flow, increasing oxygen to the muscles, and keeping the lining of the body's arteries smooth. The same studies found that these people are at an increased risk of suffering from both hypertension (high blood pressure) and diabetes.

So, make sure to avoid any alcohol-based mouthwashes. If you have it in your bathroom, toss it in the trash. That includes most of the more popular brands on the market. Not sure if your mouthwash includes alcohol? Check the ingredient label.

What to Use Instead

Instead, use any non-alcohol-based mouthwash. You can also go without mouthwash if you like. It can aid in keeping your mouth healthy, but good oral hygiene, coupled with regularly scraping your tongue and rinsing with water is usually enough.

Is Mouthwash Really Necessary?

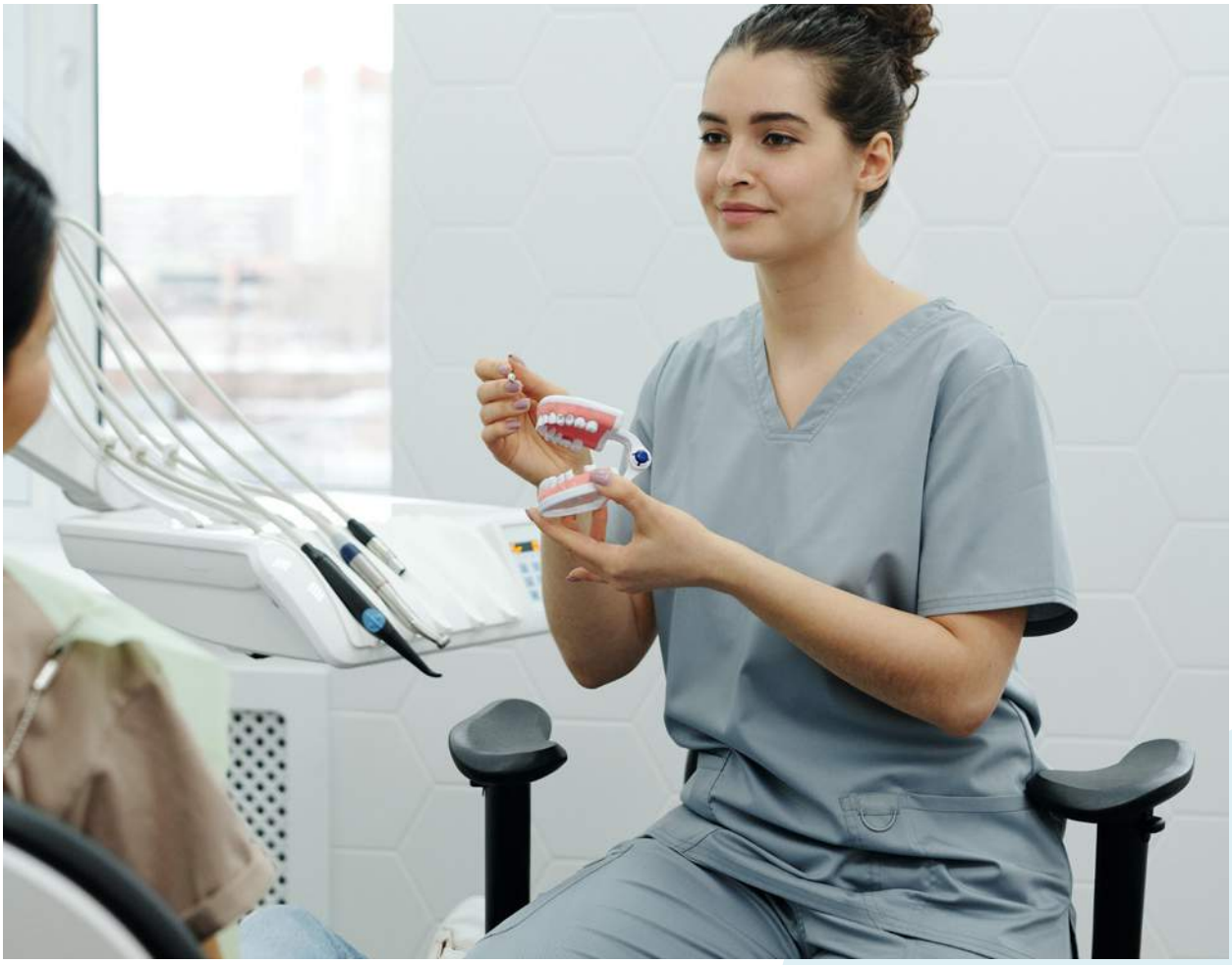
If you pay attention to commercials, mouthwash is a central component of good oral health. Is that the truth? No, it's not.

In reality, mouthwash isn't truly necessary. Yes, it can give you minty fresh breath, at least for a little while. However, it doesn't last long and using the wrong formulations could kill beneficial bacteria or feed bad bacteria.

Mouthwash is also not a substitute for brushing and flossing. You can skip using mouthwash completely if you practice good brushing and flossing habits, particularly if you combine other tips from this book, such as oil pulling, using a tongue scraper, and rinsing your mouth with fresh water.

Ultimately, no type of mouthwash has any type of long-term benefit for your oral health. The results are cosmetic at best. That doesn't mean you need to toss your non-alcohol-based mouthwash right away but realize that you might be better off

putting the money that would otherwise go toward purchasing mouthwash every month toward something else, like a high-quality tongue scraper, xylitol gum or mints, and other products that do have a lasting impact on oral health.



CHAPTER 13

The Correct Way to Brush Your *Teeth* — Manual vs. Electric

By this point, you should realize that brushing your teeth at least twice a day for two to three minutes per session is critical to good oral health. However, using your toothbrush correctly is also vital.

If you use your toothbrush incorrectly, you might not be getting your teeth and gums as clean as you could. That means you're leaving bits of plaque behind that will harden into tartar and increase the chances of cavities forming.

Using your toothbrush incorrectly may also mean wasting time and energy. So, how do you use one the right way? And does it differ if you're

using a manual toothbrush instead of an electric one? Let's look at the correct way to brush your teeth with both types.

Manual Toothbrushes

First, while there's nothing wrong with a manual toothbrush, a high-quality electric model means that you need to put in less work to get your teeth and gums as clean as they can be. If you're still using an old-style manual model, consider upgrading to an electric toothbrush!

Second, make sure to hold your toothbrush the right way. The head should be at a 45-degree angle to your teeth and gums, not a 90-degree angle (most people assume that 90 degrees is correct). This positions the tips of the bristles so that they can clean along and slightly under the gumline better, but also improves brushing across your entire mouth, including higher up your gums.

Third, make sure you're moving the brush correctly. While holding the head at a 45-degree angle, move it in small circles across your teeth and gums. Move it slowly down your gum line as you do this.

Fourth, make sure you're not using too much force. If you're trying to scrub your teeth clean, you'll end up injuring your

gums. Be gentle, take your time, and make sure you get everything as clean as possible.

Electric Toothbrushes

Electric toothbrushes are superior to manual ones in several ways. They help you get your teeth cleaner and reduce the amount of work you have to put in to do so.

To use an electric toothbrush the right way, hold the head at a 45-degree angle to your teeth and gums. Let the head do its thing –– it spins very fast, so you don't need to worry about making small circles. As the head turns, just slowly move the toothbrush along your teeth and gum line!

As with manual toothbrushes, make sure you're gentle. Too much force will injure your gums.

Why Are Electric Toothbrushes Better?

Manual toothbrushes are the most common in the US, but electric models consistently outperform them in just about every way imaginable. But what benefits do they really bring to your mouth?

- Electric toothbrushes are more effective at removing plaque and fighting gingivitis. One study found that patients who used an electric toothbrush for just three months reduced their plaque buildup by 21% and their gingivitis symptoms by 11%.
- Electric toothbrushes are easier to use for everyone because you don't need to worry about manually brushing each tooth while moving the brush down your gum line.
- Electric toothbrushes are also easier to use for those with limited mobility, including conditions like arthritis and carpal tunnel.
- Many models include built-in timers that ensure you're brushing your teeth for the right amount of time. Most adults only brush their teeth for around 30 seconds, when they should be doing it for two to three minutes.
- If you're concerned about waste, electric toothbrushes edge out manual models. You only need to replace the head instead of the entire toothbrush. The motor and main body will last for many years, unless you're using a single-use model, which must be replaced entirely every time it wears out.

However, don't count manual toothbrushes out entirely. They're more affordable than electric models and they're also more accessible. The American Dental Association (ADA) also approves them. Ultimately, it's about finding what works best for your oral care and budget.

CHAPTER 14

The Only Type of *Toothpaste* That Remineralizes Enamel

(Make Sure You Have the RIGHT One!)

Once upon a time, toothpaste was toothpaste. You had different options when it came to flavors or brand preferences, but it all did essentially the same thing. Today, that's not the case. You have whitening toothpaste, charcoal toothpaste, toothpaste for sensitive teeth, and so much more. Some of these formulations even claim to help you heal your damaged teeth.

Sadly, those claims are largely overblown, except when it comes to ONE type of toothpaste. We're talking about nano-hydroxyapatite (nano-HAp) toothpaste. What is it, how does it work, and how do you ensure you have the right type? That's what we'll discuss in this chapter.

What Is Remineralization?

Before we dive into the discussion surrounding nano-hydroxyapatite, it helps to establish what we mean by remineralization.

Tooth demineralization is the process of losing minerals from the teeth. This is usually in the form of wear. Every time you bite or chew, very small amounts of enamel wear away. Other factors can also affect your enamel, including brushing too hard, using abrasive toothpastes, and more. Organic acids from food and drink, as well as those produced by bacteria in plaque also wear away minerals.

Remineralization is the process of restoring those lost minerals. Your body naturally does this on its own through saliva, which contains calcium, fluoride, and phosphate, all of which help to remineralize the teeth. However, sometimes your body needs a helping hand. That's where the right toothpaste enters the picture.

What Is Hydroxyapatite?

Hydroxyapatite is a naturally occurring mineral. You'll find it in your bones and teeth, and it makes up 90% of your tooth enamel. It's derived from calcium apatite, sometimes called calcium phosphate. It's white and it grows hexagonal crys-

tals. Naturally derived hydroxyapatite is compatible with living tissues, meaning that the body recognizes it and can incorporate it.

How Does Hydroxyapatite Work?

Hydroxyapatite is a naturally occurring mineral and is bioidentical to the mineral in your teeth. When applied via toothpaste, it can remineralize them, replacing minerals that have been lost through acidic erosion.

It also helps form a synthetic layer of enamel over the tooth's surface, filling in cracks and crevices, and even reversing minor cavities (as long as they haven't reached the dentin layer under the enamel). Finally, hydroxyapatite also binds with plaque and harmful bacteria in the mouth, improving your oral health and reducing the chance of developing new cavities.

The authors of a clinical study published in the journal Odontology noted, "HAp is a biomimetic oral care agent, and its caries prevention has been tested in vivo, in situ, and in vitro with a high safety profile and no risk of fluorosis. While more research is needed to confirm the clinical effectiveness of HAP at preventing and arresting dental caries, the research suggesting its equivalency to fluoride toothpaste is promising.

HAp-containing oral products can be considered as an alternative in young children where fluorosis is a concern. In addition to perhaps reducing the need for traditional dental restorations, HAp also offers relief from dentin hypersensitivity and reduces biofilm formation making it a multifunctional agent for preventive oral health care."

However, hydroxyapatite (HAp) may not be the right option for your toothpaste. Instead, buy one that includes nano-hydroxyapatite (nano-HAp). Why the difference?

Nano-Hydroxyapatite vs. Hydroxyapatite

The biggest difference between HAp and nano-HAp is particle size. Think of the difference between a sugar cube and a sugar granule. They're the same thing, but one is much, much larger than the other.

In this example, the sugar cube is hydroxyapatite, and the sugar granule is nano-hydroxyapatite. Both are the same thing; one is just smaller than the other. Nano-sized particles can penetrate smaller spaces, helping to improve the rate of remineralization and healing of damaged enamel.

To sum up, HAp works, but nano-HAp works better.

Other Ways to Remineralize Your Teeth

While using a toothpaste that contains nano-hydroxyapatite will definitely help remineralize your teeth, you can take additional steps. These include the following:

- Reduce your sugar consumption. Sugar is technically neutral (neither acidic nor alkaline), but it feeds the acid-producing bacteria in your mouth. It can also contribute to the overall acidity of foods and drinks when used as an ingredient.
- Limit or cut out most dairy products. Butter, cottage cheese, and most hard cheeses are acidic and will accelerate the demineralization of your teeth. Cow's milk is weakly acidic, with a pH between 6.7 to 6.9, so it should be safer to consume than other dairy products.
- Increase saliva production. We discussed this in the very first chapter in this book. Your body's saliva is a powerful tool against dental decay, and products that contain xylitol can help you jumpstart your saliva production safely.
- Avoid acidic drinks. Coffee and soda are two of the worst offenders, but even tea can be acidic and affect the mineralization of your teeth.

CHAPTER 15

The RIGHT Way to Use ACV for *Health* That Will Protect Your Teeth from Harm

ACV (apple cider vinegar) is a tested, trusted health aid. It's been used for hundreds of years for a very wide range of purposes, from weight loss to reducing blood pressure and increasing the acidity of stomach acid. These effects are backed up by scientific studies, as well, which means it's an effective tool to improve your overall health.

It's also a danger to your teeth. If you're using ACV, you MUST make sure to use it correctly or you could cause irreparable harm to your oral health. Here's what you need to know!

What Is ACV?

Apple cider vinegar is just what it sounds like – apple cider that has fermented to the point that it becomes vinegar. It's an important tool for people interested in glycemic control,

weight loss, and improved blood pressure, to name just a few benefits.

When it comes to oral health, ACV is often used to treat bad breath, kill bacteria (the acid destroys both good and bad bacteria), and help balance the pH of your mouth if it's too alkaline. It's used in foods, but many people also supplement with it in liquid form.

The Dangers of ACV

While apple cider vinegar offers proven health benefits, it's not without its downsides. It's highly acidic, like all vinegars. Shooting it straight (as many people seem to do) is a recipe for tooth deterioration and even burns to the soft tissues of your throat.

Highly acidic foods and drinks erode the enamel on your teeth, causing discoloration, tooth sensitivity, and more. It also leaves your teeth more susceptible to damage and cavities. So, how do you take advantage of the many health benefits offered by ACV without harming your teeth or throat?

How to Use ACV Correctly

To benefit from apple cider vinegar safely, just mix a single teaspoon of ACV with eight ounces of water. The dilution ensures that it's safe for your teeth and throat, while still giving you the "good stuff". Make sure to rinse your mouth immediately with clean, fresh water.

Other Ways to Incorporate ACV into Your Diet

The simplest way to incorporate ACV into your diet and get all the benefits without harming your teeth is to mix it into a glass of water as we just discussed. However, you can do so much more with it!

- Add it to your favorite beverages. You can add a tablespoon or so of apple cider vinegar to just about any beverage. That will dilute the acidity while still giving you health benefits. It will change the way your beverage tastes, so start with a small amount and work your way up as you get used to the new flavor profile. ACV mixed into a morning cup of tea is a great pick-me-up that also boosts your health.

- Combine it with your salad dressing. This is particularly good if you love oil and vinegar or vinaigrette-style dressings. It's a great way to add health-giving benefits while maximizing the flavors of ACV. Salad dressings that include ACV have also been shown to improve digestion.
- Use it to marinate proteins. From chicken to steak to tofu, you can add ACV to marinades and tenderize your protein while adding flavor and health benefits.
- Combine it with different foods, like egg salad. The acetic acid can help lower LDL cholesterol and the twang is a nice accompaniment for the eggs. You can further increase the health benefits by including avocado in the mix.

Tips for Using ACV

If you've never taken ACV before, it can be challenging. The strong flavor profile combined with the high acidity level can be off-putting and even damaging to soft tissues and your teeth. If you're new to using it, check out the tips below.

Start Low

It's tempting to go with the largest dose of ACV you can handle but try to scale things back a bit. Start slow and take a smaller dose. Work your way up to larger doses. It's not just about the strong flavor and high acidity, either. See how

your body reacts to taking it. If you notice a burning sensation in your stomach or if your stomach is upset, reduce your dosage.

Skip the Skin

You'll find ACV called for in many topical home remedies, and for the most part, these are safe. But never, ever apply ACV directly to the skin undiluted. Just as you should never shoot it straight, you should never put it on your skin without a buffer in the form of other ingredients, even if that's just water.

Watch Out for Other Irritating Ingredients

Apple cider vinegar is a powerful tool for better health. However, it's also an irritant. That effect becomes more pronounced when you combine it with other strong ingredients – think lemon juice. While you can certainly augment the power of ACV by combining it with these ingredients, you need to modify the resulting mixture with something soothing, like water and honey, and always be aware of the damage that apple cider vinegar can do to your teeth, gums, and other soft tissues in your mouth and throat.

CHAPTER 16

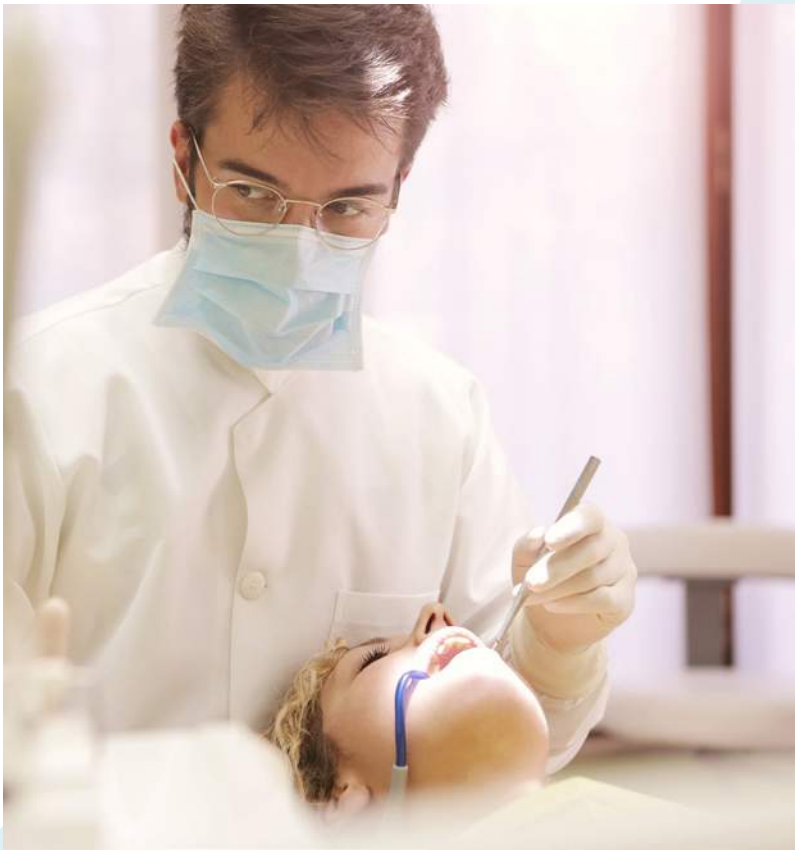
The 3 Things That Cause Erosion to Your *Enamel* and Why You Should Care!

The thin layer of enamel over your teeth is all that protects them. Unfortunately, many things can affect your enamel. And when it's gone, it's gone. There's no coming back from that.

What are the most dangerous threats your enamel faces? In this chapter, we'll discuss the three things that erode your enamel and why you should care.

Acids

First, anything acidic is an enemy of your enamel. Most people don't go around gargling with acid, though, so where do these threats come from? Primarily, they stem from two sources:



- **Bacteria** – Bacteria like Strep mutans produce acid, which eats through the layer of enamel over your teeth, eventually creating a cavity. If left untreated, that can grow into an abscess, leading to a host of nasty side effects, including blood poisoning!
- **Foods and Beverages** – We also consume acid regularly. Coffee, tea, and soda are all acidic, some of them exceptionally so. Coffee has a pH of 4.85 to 5.10, while soda has a pH of 2.6 to 2.7 (soda is far more acidic than coffee). Black tea has a pH of between 4.9 to 5.5, but other varieties can have a pH as low as 3, which is still less acidic than soda.

Not sure how pH levels work? It's a scale from 0 to 14, with 7 being neutral. The lower the number, the more acidic the substance. The higher the number, the more alkaline the substance.

Acids also come from the foods we eat. Processed foods, dairy products like cheese, and even tomatoes are all high in acid, although they're still lower on the pH scale than soda.

Be aware of what you're eating and drinking to limit acid erosion to your enamel. Make sure you're brushing your teeth at least twice a day and flossing regularly to remove acid-producing bacteria, too.

Abrasives

Acid isn't the only threat your enamel faces. Abrasives can also wear through it and cause serious damage. In almost all cases, these are things that we put in our mouths ourselves, including:

- **Hard-Bristled Brushes** – Hard bristles can wear through your enamel, particularly if you're trying to scrub your teeth.
- **Teeth Whiteners** – While some teeth whiteners are fine and won't damage your enamel, others can be very abrasive and cause extensive damage.
- **Toothpaste** – Charcoal-based toothpaste and other abrasive formulations can cause serious damage to your enamel.

Be cautious with any products you use in your mouth. Make sure you have a soft-bristled brush and brush your teeth gently. That will help preserve your enamel and help reduce the chance of injuring your gums. Avoid abrasive products like some teeth whitening systems and toothpastes.

Habits

Finally, some of the things that erode your enamel are related directly to your habits. Some of the most dangerous and damaging habits include:

- **Biting Your Nails** – The only thing that should touch your nails are nail clippers. Biting your nails is bad for your teeth AND your nails.
- **Chewing Ice** – If you love to crunch ice, you're not alone. However, it can cause serious damage to your enamel and even harm your teeth over time and through wear and tear.
- **Grinding Your Teeth** – Do you often have to force yourself to unclench your jaw? Do you wake up in the morning with pain in your jaw or a headache? Teeth grinding is a serious problem that will damage your enamel and can also lead to other health issues.

Take the time to assess your habits and then train yourself out of them. The good news is that habits can be broken. You just need to be intentional about it.

Why Does It Matter?

Let's address the big question here. Why does any of this matter? Why should you try to change your lifestyle, diet, or habits for the sake of your enamel?

First, tooth enamel does not regenerate. Once it's gone, it's gone for good. Second, once your enamel is gone, you will experience a wide range of unwanted, negative situations, from increased staining and darkening to sensitivity, increased cavities, and decreased overall oral health.

Third, oral health affects your entire body. It's not just about cavities or stained teeth. Poor oral health is linked to diabetes, inflammation, clogged arteries, stroke, and more.

So, for the health of your teeth and gums, as well as your overall health, it's critical that you take care of your enamel.

CHAPTER 17

Is Your *Favorite* Drink Damaging Your Tooth Enamel?

Use This Simple Trick to Find Out Instantly!

In the previous chapter, we talked about how important it is to protect your tooth enamel from threats. We also discussed the fact that many foods and drinks are highly acidic and can erode your enamel permanently. Where does your favorite beverage fall? Is it harmful or helpful? In this chapter, we'll cover a quick pH tip that you can use to find out instantly.

Step 1

First, get your favorite beverage. That might be a cup of black coffee, a cup of tea, or maybe a soda.

Step 2

Pour your drink into a cup. Any wide-mouthed cup will work.

Step 3

Use a pH meter to test your drink. All you need to do is turn it on and insert the probe end into your beverage (this is why you need it in a cup).

Step 4
Check the readout.

Of course, it helps if you know what you're looking at. For those who don't have any experience with the pH scale, here's a quick breakdown.

What?

The pH scale measures acidity and alkalinity. It runs from 0 to 14, with 0 being the most acidic and 14 being the most alkaline.

How?

The midpoint of the scale, 7, is neutral. Higher than 7 is alkaline and lower than 7 is acidic. Battery acid would score a 0 while bleach would score pretty close to a 14. The human body usually hovers just over 7, with most people's pH falling around 7.35 or 7.4 (slightly more alkaline than acidic).

Where does your beverage fall on that scale? If you're drinking coffee, chances are good it's somewhere around 5 or maybe a little lower. If it's soda, it's probably 3 or lower. Some sodas, particularly diet sodas, come in around 2.84, which

is just higher than apple cider vinegar, which is highly acidic and scores 2.7.

Why?

So, why does this matter? What can you take away from this? Your tooth enamel can withstand some acidity. That way, we can eat slightly acidic foods without causing permanent damage to our teeth. However, anything with a score lower than 5 erodes your enamel and should be consumed in moderation (if at all).

What happens if you don't limit your consumption of acidic beverages? Chronic exposure over a long time will lead to yellowing, tooth sensitivity, pitting of the tooth's surface, and many other problems.

CHAPTER 18

The 3 Things That Cause Dry *Mouth*

Dry mouth is uncomfortable and can lead to serious issues, like halitosis and bacterial overgrowth. What causes it? And what can you do to treat it?

In this chapter, we'll dive into the causes of dry mouth and the things you can do to alleviate it.

What Is Dry Mouth?

Dry mouth is a medical condition also called xerostomia. It occurs when your salivary glands are unable to produce enough saliva. Without enough saliva, you're at an increased risk of tooth decay and bacteria can thrive. The condition can be an annoyance, or it can become a major threat to the health of your teeth and gums, and even your overall health.

What Causes Dry Mouth?

Many things can cause dry mouth, at least temporarily. For instance, breathing through your mouth will cause dry mouth.

However, some causes are more serious and can lead to chronic dry mouth, which puts your oral health in danger.

Medications

Many prescription medications cause dry mouth as a side effect. Blood pressure medications, pain medications, and even decongestants can leave your mouth dry and uncomfortable. Many of these are medications you must take daily for months, years, or even an entire lifetime, which can put you in danger of oral decay.

Sjögren's Syndrome

Sjögren's syndrome is an autoimmune disease in which the immune system attacks glands in the body that produce moisture. This includes the eyes, but also the mouth. Dry mouth is one of the most common symptoms, but the disease can also cause dry lips and throat, dryness in your nose, joint pain, and more.

Vaping and Smoking

Nicotine reduces the production of saliva in your mouth, which leads to dry mouth. This applies to smokers, but also to anyone who vapes. Prolonged dry mouth from smoking and vaping will lead to the same oral health problems as with other conditions.

Fighting Back: What You Can Do to Treat Dry Mouth

For some people, treating dry mouth is as simple as quitting a bad habit. If you smoke or vape, quit now. As the nicotine leaves your system, your dry mouth will abate. Until then, or if you choose not to quit, you can boost saliva production by chewing sugar-free gum or mints that contain xylitol.

For those taking medications or dealing with an autoimmune disease like Sjögren's syndrome, sugar-free gum and mints are helpful. ProvaFresh can also help. It contains xylitol and is designed to stimulate saliva production.

You can use ProvaFresh first thing in the morning, after meals and snacks, before bedtime. It also includes bamboo silica and hyaluronic acid for gum health, as well as sea salt to fight bacteria, and dicalcium phosphate to help remineralize your teeth.

Conclusion

When most people think about their health, they picture their weight or their heart health. Our society tends to separate oral health from physical health, but the truth is that what happens in your mouth affects every other part of your body.

Bacterial overgrowth in your mouth can lead to inflammation throughout your body, rising infections, and even heart disease and stroke. It can put you at higher risk for diabetes and increases your risk of developing a wide range of other diseases.

Thankfully, there's a simple solution that can address both oral health concerns and your worries about overall health: good oral hygiene.

The challenge, of course, is that there's so much more to sparkling oral health than just brushing your teeth. You need to brush them the right way, for the right amount of time, the correct number of times per day. You must also dive deeper into oral hygiene because brushing your teeth only does so much.

Regularly flossing, fighting back against dry mouth and bacterial overgrowth with tools like xylitol, and regularly scrap-

ing debris and bacteria from your tongue are essential steps toward better oral health.

The Tools and Knowledge You Need

Most people are surprised to learn that they don't have the tools or knowledge they need to really care for their mouths properly. This book provides you with exactly what's necessary, from strategies to increase your saliva production to fighting bad breath and naturally whitening your teeth.

By this point, you should be ready to take control of your oral care and move toward sparkling oral health. Make use of the tools and techniques discussed within this book to improve the strength of your teeth, rebalance your oral microbiome, repair minor cavities, and eliminate products that might actually be damaging your mouth (we're looking at you, alcohol-based mouthwash!).

A Partner for the Future

Don't feel like you're on your own when it comes to managing your oral health. You have a partner who can help you care for your teeth, gums, tongue, and the rest of your body. Your dentist is the best source for further information about oral care and will help you keep an eye on your overall oral health.

Make sure you schedule your regular dental visits at least twice per year, but don't limit yourself to biannual cleanings! If you have questions or concerns, want to learn more about products like xylitol mints or gum, or tools like ProvaDent or ProvaFresh, your dentist is the expert to turn to!

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