The purpose of this paper is not to bore you with all of the scientific details of oral care, but to enlighten you on best practices, which can vary among professionals in this industry.

We will try to summarize the best points, data, information about what works and why it works. Another reason for writing this free paper is to illustrate some of the harmful, yet widely UNKNOWN problems with dental professionals. It’s not to attack anyone or any organization, but to enlighten people on their choices in oral care. Knowledge is power.

We believe that everyone should know about choices and consequences involving oral care, because it directly affects one’s health. Having poor oral care, will create systemic health problems for the entire body.

**Proper Care**

While growing up I’ve heard many different opinions, from various dentists growing up in regards to what's proper care. One thing that everyone agrees on is flossing. You might hear that “flossing is more important than brushing.” While we agree about this as well, we also know that many cavities occur in the back molars due to the cusps and ridges where food gets stuck. Only brushing can loosen material in some cases, so brushing and flossing give a person the best chance of success.
pH Of Your Mouth

This is a dentistry topic that is not really discussed in dentist offices, but **alkalinity of the mouth has everything to do with decay** (also called demineralization) and the opposite, in which you can get a tooth to heal from a cavity (called remineralization). Unfortunately, demineralization can happen really fast; while remineralization is a slow and lengthy process that some can achieve if they are working towards a goal.

When the mouth is acidic demineralization occurs. By using mouthwashes, toothpastes or tooth powders that are HIGHLY alkaline (not all are) you can quickly stop the demineralization process- instantly.

Believe it or not, the best alkaline dental products are natural ones with high amounts of xylitol, calcium carbonate and baking soda. But even within this natural category, we have tested mouthwashes and toothpastes that were not so alkaline.

Most of the mouthwashes were neutral in pH OR they were slightly acidic. Toothpastes and tooth powders were the best for creating alkalinity in most cases. *Frau Fowler’s Tooth & Gum Powder* was the best we have tested so far. After brushing we tell people to SWISH it around in the mouth, so that it’s not only a tooth powder, but becomes a mouthwash. Alternatively, after eating, you can “eat” a small amount of powder or swish it around like a mouthwash real quickly to instantly change the pH of your mouth to a super alkaline environment. Because of the high amounts of organic essential oils, the alkalinity tends to stick around longer than products with no plant based oils. If you’re truly interested in this, you can even buy your own pH strips that are available in most health food stores and start testing your mouth after meals, after drinks, you can test the pH of different solutions. In the end, it makes you more mindful and knowledgeable about pH. Our favorite is testing tap water, because MOST tap waters are acidic! EPA standards call for 6.5 to 8.5 for municipal sources, but in reality tap waters all over the country are not adhering to this. Just checking my own tap water this week, it was a 5.5 pH, well below EPA standards. Not good for your body and not good for teeth.
Don’t be confused with drinking lemon water. It eventually makes the body very alkaline, but it will destroy teeth. Spinach is good for the body, but the oxalic acid in the spinach can destroy the pellicle on the teeth making them sensitive.

If you don’t have a dental product that you can quickly use to change your mouth pH, try mineral water (some tout very alkaline levels) or even baking soda. Sometimes even “green drinks” are so alkaline that, it’s best to finish a meal drinking one of those because you end on an alkaline substance. Xylitol mints and gum are another option, but probably a second choice if you have tooth powder, a highly alkaline mouthwash or alkaline toothpaste with you.

Being mindful that keeping an alkaline mouth after eating or drinking acidic foods (which is the typical diet is for most people in industrialized countries) can stop demineralization of teeth and is a very good dental practice.

**pH of Saliva**

Your pH of your saliva is not only determined from what you eat, but other facts as well. Some you can control, others you cannot. For example, hormones in women (especially in pregnancy) and make the saliva constantly acidic. The early morning hours, right before we wake is when we are least protected by our saliva. A good morning routine is to wake up and immediately BRUSH and spit, OR use mouthwash that is alkaline. Then you can change the environment quickly in your mouth and also spit out the bacteria you have accumulated instead of swallowing it.

Balancing pH in the mouth and saliva allows for a healthy balance of good bacteria and reduces bad bacteria that can cause gum disease, demineralization of teeth (cavities) and tooth decay. Eating foods like sugar, breads, starches, sodas, etc., feed lactic acid and that’s the type that causes tooth decay.

Consuming acidic foods and drinks can likewise lower the pH within the mouth. Depending on the frequency (and the acidity) of food intake, the bacteria in plaque will be exposed to a variety of episodic challenges of low pH.\(^1\)

\(^1\) *Philip D. Marsh, Michael V. Martin, Oral Microbiology, 5th ed. (2009),15–16.*
Many of the predominantly healthy bacteria within dental plaque (nonacid producers) can tolerate brief conditions of moderately low pH but are inhibited or killed by more frequent or prolonged exposures to acidic conditions. If a patient’s mouth experiences dramatic or long-lasting periods of low pH, this can result in the enhanced growth of, or colonization by, aciduric and acidogenic (cavity causing) bacteria.

Dental plaque that is kept at a pH of 7.0 or greater does not experience this shift in the bacterial species to aciduric and acidogenic (cavity-causing) bacteria even during exposure to sugar. If the pH in the mouth can be maintained at a neutral or alkaline pH, regardless of sugar, food, or acidic drink consumption, the healthy bacteria within the dental plaque biofilm will not die and the shift to cavity-causing bacteria will not occur.

**Gum Disease and How it Affects Your Body’s Wellness**

Healthy gums are paramount when discussing the health of the overall body. Assuming someone does not have tooth decay, there still in a huge emphasis with having healthy gums.

Dental plaque is that sticky, nasty stuff that grows between, along the gum line and on teeth, creating tooth decay. It’s important to floss and brush teeth for at least two minutes, twice a day, to remove it. That part you’ve heard before. The beginning part of “gum disease” is gingivitis, which are tender, swollen gums that can bleed. If you are experiencing bleeding gums, just remember that all of the bacteria in your mouth can now access your bloodstream.

The skin of the oral cavity is known as “Oral Mucosa.” It’s rich in blood vessels and bacteria have a direct access to your bloodstream through bleeding gums. When toxins and bacteria have direct access, this is the “link” to heart disease, stroke and I believe, other autoimmune

---

type diseases and conditions. Although this link is still being studied, one can assume that bacteria in the mouth should not get into one’s bloodstream.

**Hormone Imbalances Causing Gum Recession and Other Oral Care Problems**

No matter how hard you work on your oral health, sometimes you have some issues that are too hard to control. For example, women who are going through pregnancy or through their monthly cycle will have hormones like progesterone sky rocket, producing swollen gums, gingivitis and canker sores! Bad bacteria loves progesterone and the increase can attract bacteria to the mouth in droves.

When I was sick with Lyme disease (check out my oral pathology story below), I had very low estrogen at the time. Having low estrogen can cause gum recession and can cause bone loss (tooth decay). The only lasting marker I have from that experience is a small gum recession area. But illness and hormones can do a number of oral health, so if you are having oral care issues, visit a dentist and also see someone who can help you balance your hormones.

**Vitamins- Supplements For Oral Care**

We are big believers in supplementing. There are certain nutrients that are needed in the body to support optimal dental health. Most commonly is calcium, but there are many trace minerals that are quite important. Even vitamins like C, can be useful for gum health.

**Strontium**

Strontium is an alkaline earth metal and can be found in sea salt. This mineral is often seen in products used to increase bone density. Samples of whole human enamel was analyzed by spark source mass spectrometry. HIGH strontium concentrations levels in teeth of low caries (cavity) individuals and LOW strontium concentrations were found in those who were high caries individuals. Strontium STIMULATES CALCIUM DEPOSITION IN BONES AND TEETH. Giving rats strontium in their diet increases the buildup of dentin in their teeth.⁵ Out of

---

35 inorganic elements, strontium was the only element found to be present in significantly lower amount in carious teeth.⁶

**Calcium**

Calcium is probably the most widely recognized supplement for dental health and for the support of bone health. Calcium-containing dentifrices were shown by electron microscopy and hardness measurements to put MINERAL onto the surface of enamel and to HARDEN IT. Conventional fluoride toothpaste did not.⁷

**Vitamin K**

Calcium supplements usually have both strontium and Vitamin K for bone health. Vitamin K assists the support and movement of calcium through the body and has been studied for its effectiveness for healing injuries such as bone fractures and bone loss. Vitamin K activates a protein hormone called osteocalcin, produced by osteoblasts, which is needed to bind calcium into the matrix of your bone. Osteocalcin also appears to help prevent calcium from depositing into your arteries.⁸

**Vitamin D**

Vitamin D helps you absorb calcium. The reason why calcium is not taken alone is because you need D to absorb it and you need K to make sure it gets deposited correctly!

Bones are made up of dozens of minerals, not just calcium. Silica and magnesium should be mentioned here also. Guess what is a great source of trace minerals that contains 84 of the elements found in the human body? **Himalayan Salt and Sea Salt.** Now you know why it’s in our dental powder!

---


⁸ Mercola (March, 2011). “Vitamin K: The Missing Nutrient to Blame for Heart Attacks and Osteoporosis (Nope - NOT Calcium or Vitamin D).”
Nutrients for the Gums

CoQ10

CoQ10 has show effectiveness. Patients suffering from severe periodontal disease which had not responded to extensive flossing and brushing were studied. 13 subjects received 50 mg of CoQ10, 11 received placebos. 9 of the 13 CoQ10 patients improved dramatically. Only 3 of 11 placebo recipients showed minor improvement. In 4 of the CoQ10 patients, symptoms of the disease completely disappeared within 8 weeks. 9

Vit C

Vitamin C is said to be a top vitamin for helping with ANY kind of gum disease issue. Maybe because it’s an electron donor and electron donors give much needed electrons to tissue and cells that are damaged. That's why C is a top vitamin to take. It’s used in skincare and dental products to promote healthy TISSUE and COLLAGEN.

Dentistry- What You Need To Know Before Going To A Dentist

There is a lot to cover here; so much so, that you might want to check out some of the following information if you’re truly interested in your options for oral care. Surprisingly, what you're told at the dentist office really may be BAD advice. Some of the routine dental procedures that people go through are not only a dangerous, but can create long term health issues. Getting your dental problems taken care of properly is one of the single best things you can do to stay healthy for life.

Root Canals

A veterinarian will tell you that if your dog has a diseased tooth, it needs to be removed or your dog will get sick. **In the USA, our dentists attempt to “help” a person keep a dead tooth by giving a procedure called a “root canal.”** It just so happens to cost a lot more money than pulling a dead tooth.

Don’t be mislead thinking it’s your only option. Teeth are similar to other organ systems in your body in that they also require a blood supply, lymphatic, and venous drainage, and nervous innervations. Root canals are teeth that can easily become the source of bacterial toxicity in your body. A dentist will remove the nerve from the main canals, leaving behind dead nerves that they cannot access. Anaerobic bacteria, which don’t need oxygen to survive, THRIVE and created toxins from digesting dead tissue. Blood and lymphatics that surround the area allows the matter to spread. Many people who have autoimmune diseases should take a good hard look at what dental work is present.

**Biological Dentists**

Our recommendation if you have dentistry needs that are beyond a regular cleaning, see a biological dentist. Many people who are sick know about biological dentists because they are reading books about their conditions and find out about the oral pathology connection. I know because I wrote a book called, *The Tick Slayer*, which is a medical non-fiction book about my recovery from Lyme disease. Because of the book’s popularity, the ideas and information regarding the health of teeth was something that got passed around and ultimately accepted. My healing came from many therapies, but I regard my cleaning with a biological dentist, the SINGLE most important thing I did to get rid of Lyme disease and Lupus (two conditions I no longer have).

**Frau Fowler’s Story Of Healing From Oral Pathology**

*Routine Wisdom Teeth Extraction Creates Massive Health Problems*

To make a really short story of a very long healing endeavour, I’ll start with the fact that I had wisdom teeth (all 4) removed when I was 19 years old. This is a common practice to do in the
teen years, with oral surgeons saying that “impacted wisdom teeth are a problem for the jaw and can crowd the teeth,” etc.

I’m not really sure why I had it done, but I believe my parents were just talked into believing that was the only option. I didn’t have any dental problems before that time. The “best” dental surgeon in South Carolina put me to sleep and cut all 4 out.

4 years later, I fell ill at the 2005 US Track and Field Championships during my race. My body went cold and numb on the second lap of the 800m. After the race, I vomited like I was toxic, but had nothing coming out. I was sick and scared. All I knew was that something very bad was happening to me and I had ignored small signs of physical problems while training.

What was known at the time was that I had a tick bite the previous summer. It was carrying Lyme, but at the time I did not seek aggressive medical treatment because Lyme was not really a disease that anyone knew or heard about it.

I did end up healing from my own research, using myself as a therapy/treatment guinea pig with all things natural, because the conventional method of taking antibiotics left me bedridden sick, toxic and psychotic. The story is a positive one, although the physical pain and athletic years lost, seem like a huge price to pay.

It was only until I had my cavitations cleaned where the wisdom teeth use to be, that I ended up fully recovering from all of my health problems and to go on to lead a very happy, healthy life.

Cavitations are the pockets where teeth sit and once they are removed, those pockets are still there. Cutting teeth out opens the susceptibility to infection and all 4 of my cavitations were harboring diseases like gangrene and other types of pathology. This toxicity was slowly seeping into my lymph and blood, keeping me an “autoimmune diseased” patient. During my cleaning, I distinctly remember the “black oil” material that was being sucked out of those pockets.

I cannot stress the importance for any individual to NOT be talked into dental procedures that could create lasting negative impacts. Getting metal fillings to having full blown toxicity
in cavitations, can all lead to major health crisis later on. Some take years to get sick, while my cavitations becoming toxic happened quite fast.

I believe toxic cavitations are a health disaster for most people in this country and the worst part is that it’s a silent thing. Often, there is no pain that presents itself.

We suggest the recommended readings to understand what’s at stake when you have oral pathology from root canals, wisdom teeth extract, caps or crowns and implants.

Uninformed Consent
by Huggins, Hal A./ Levy, Thomas E.

Root Canal Cover Up
by George E. Meinig

The Roots of Disease: Connecting Dentistry and Medicine
by Robert Kulacz D.D.S.

If you or anyone knows of someone who is physically ill with an autoimmune disease of any sort, please guide them to a biological dentist.

For reference to a biological dentist- please visit: http://journal.iabdm.org/

Ingredients in Dental Products That You Should Know About

To Fluoridate or Not To Fluoridate

That’s the question on most people’s mind. There are plenty of people and some who even did research to prove it that it’s not as necessary as one thinks. Many healthcare professionals and researchers say that with all the fluoride in tap water, we are getting more than what we need….perhaps to a dangerous level. We tend to lean to the dangerous fault side of the
argument. While it’s good for cavities, it’s potentially toxic and we believe most people are getting their fill of it.

**Sodium Lauryl Sulfate (SLS)**

SLS is still found in “Natural Toothpastes.” That’s unfortunate, because it really is an irritant for most people and it damages the pellicle layer on the tooth, which is helping erosion. SLS can remove the pellicle and a smear layer present on dentin.  

**Saccharin**

This artificial sweetener is found in toothpastes for kids. I don’t eat fake sugar. If you wouldn’t eat it, then it shouldn’t go in your MOUTH or on your SKIN.

**Sodium Fluoride**

This is an ingredient in rat poison.

**Triclosan**

This is a chlorinated aromatic compound which “may” alter hormone regulation. If you read more into this one, while it can be helpful to prevent bacteria, so can a host of natural ingredients, without the dubious negative impacts. It was first registered as a pesticide.

**FD&C Blue Dye # 1 & 2**

I had a friend who was allergic to red and blue dye. It’s synthesized from petroleum. FD&C color dyes may also cause potentially severe allergic reactions, asthma attacks, headaches, nausea, fatigue, nervousness, lack of concentration, and cancer.

**Hydrated Silica**

So surprisingly this is added as main ingredient in MANY natural toothpastes, while it’s studied in caries research for its ability to damage tooth enamel.

---

10 Parkinson CR. “Smear layer integrity and the role of surfactants.” J Dent Res.2007;86(Spec Iss B):188.
Hydrogen Peroxide

Bleaching gels cause enamel erosion. Hydrogen peroxide caused the most significant enamel erosion. Hydrogen peroxide even with additives like calcium gluconate or fluoride still causes enamel erosion. Basically, it’s a bad idea to whiten your teeth with bleaching gels. Sensitivity is thought to be due to the hydrogen peroxide molecules passing through the enamel and dentin into the pulp and causing pulpal inflammation.\(^\text{11}\)

Frau Fowler’s Tooth and Gum Powder Ingredients

Since taste is so important, a great taste can MEAN quality. We use a blend of highly functional ingredients. While the flavors (essential oils) differ in each product, there are a few that remain constant in most products. Just as important for flavor, these ingredients bring real functionality. Researched and science-based.

Calcium Carbonate

Research has indicated that using calcium carbonate can be just as powerful as fluoride when it comes to preventing cavities. This is a necessary (and HEALTHY) component for those who want to heal cavities (also called caries) and/or prevent them. Calcium-containing, sodium bicarbonate-based toothpaste formulations were shown by electron microscopy to smooth tooth enamel WITHOUT introducing new scratches. In contrast, commercial whitening toothpaste removed similar scratches but also created NEW ONES.\(^\text{12}\) Secondary caries remain a problem limiting the longevity of those who have composite fillings. Calcium Phosphate (NACP) had the highest enamel remineralization and it was significantly HIGHER than fluoride-releasing control group. It remineralized 4-FOLD that of a the fluoride-releasing control.\(^\text{13}\)

Celtic Sea Salt & Himalayan Salt Crystals


\(^\text{13}\) Weir, M D; Chow, L C; Xu, H H K. “Remineralization of demineralized enamel via calcium phosphate nanocomposite.”, PMID:22933607.
Not only is it highly antibacterial (caries are caused by bacteria), it’s anti-inflammatory and it’s high in naturally occurring trace minerals. Teeth are porous bone structures. Bones need minerals. The base of our tooth powder provides tooth remineralization and a big bonus is that it also provides soft abrasion (powdered sea salt is between 0.035 – 0.5 microns (um), which is extremely small.) - just enough to rid tough stains. You know that after-dentist clean feel when your teeth are cleaned with a high water pressure and a slurry of baking soda? Yeah! It’s THAT kind of clean!

**High Quality Wild-Crafted and/or Organic Essential Oils**

“Wildcrafted” is the name for plants that don’t typically come from farming, instead they are wild harvested. These plants are not conventionally farmed so very little equipment is used and no known chemicals are used. Our essential oils at just the right balance not only provide amazing flavor, but have antibacterial properties. Some essential oils have promising effects against oral pathogens and suggest its likely usefulness to combat microbial growth. Essential oils have amazing healing properties for gums that are bleeding or diseased. Our oils are critical to our tooth powder and we make sure we have THE highest quality.

For interproximal plaque, the essential oil mouth rinse produced statistically significant reductions in total recoverable streptococci counts S. mutans counts of 69.9% and 75.4%.

Exposure to a half-strength essential oil mouth rinse produced statistically significant reductions on all of the strains tested with percent reductions ranging from 85.74% for S. gordonii to 99.77% for S. sobrinus when compared to the control study. The authors concluded that their

---


study provided evidence that the essential oil mouthwash tested, significantly reduced the level of S. mutans, and demonstrated in situ bactericidal activity.  

**Xylitol**

Pregnant women who chew xylitol up to 4 times a day produce babies who have significantly less caries up to 5 years of age. Why? Because xylitol is a bacterial inhibitor and pH neutralizer. We love it. Xylitol is a sugar alcohol that inhibits the growth of streptococcus mutants, the caries bug. We use a Non GMO form made from corn cobs. We chose this kind of xylitol because it’s HIGHLY renewable.

**Sodium Bicarbonate**

Considered one of the best components of a toothpaste, “baking soda” was used for well over a century to clean teeth. It has anti-caries properties. Still used in dentist’s offices for that final cleaning that leaves your teeth feeling smooth and wonderful, it offers a fine abrasion that takes stains off teeth (a mechanical cleanser like the Celtic Sea Salt), is an ANTISEPTIC to prevent infections and it’s ALKALINE. Toothpaste that uses sodium bicarbonate has better teeth whitening and plaque removal POWERS.

**Extra Virgin Coconut Oil**

Extra Virgin Organic Coconut oil is a potent antibacterial and has been a traditional Indian folk dental remedy for thousands of years. Not only does it prevent biofilm formation (that are


ultimately responsible for creating cavities), it’s effective against plaque. The fats in the oil also help with cracked lips and dry throat when used as a swish.

**Quick Checklist of Things To Remember**

- Brush your teeth twice a day. Use a highly alkaline toothpaste or tooth powder with high quality ingredients. (There is evidence to suggest that powders are more effective than toothpaste.) Try to brush ONE MORE time during the day, if possible.
- Floss daily.
- Use an alkaline mouthwash, mineral water, xylitol gum or mints, swishing around toothpaste or tooth powder, can help you keep an alkaline mouth after eating or drinking.
- Take your supplements, especially if you’ve been tested with a micronutrient test for low levels of essential nutrients.
- Stay away from processed starches and sugars.
- Regularly consume water with a high alkalinity.
- If hormones are imbalanced, get them balanced to keep gums from receding and teeth from decaying.
- If you are in need of dental work, outside of general cleanings, check out a biological dentist to do any major dental work.
- If you have metal fillings, get them removed by a holistic dentist or biological dentist.

**Lastly, SHARE THE LOVE!**

If you know someone who has an illness or autoimmune disorder, SHARE this white paper with them! *Sharing is caring!*

[www.FrauFowler.com](http://www.FrauFowler.com)

---

About the Author

Perry Louis Fields is a former US Track and Field athlete, who graduated from Clemson University. She is a food scientist and packaging engineer. Perry is welsh for “Pear Tree,” and the name is her mother’s maiden name. Her grandfather was Dr. William Perry who delivered countless babies in rural South Carolina, as well as other general practitioner duties. Perry has been a health coach for the past decade, with a history for figuring out the impossible. Her clients were from all corners of the world, sick with autoimmune and infectious disease. She is also a medical non-fiction author and pioneered alternative medical practices to treat Lyme disease. She has a strong interest in plants and plant medicine. She can be reached at smile@fraufowler.com or by calling 720-316-1972.

The remedies, approaches and techniques described herein are meant to supplement, and not to be a substitute for, professional medical advice, diagnosis, or treatment. Always seek the advice of your biological dentist or physician when making decisions about medical care.