

## **BLEACHING**

Some things every Parent, Patient, and Dental Care Giver needs to know about “Bleaching”  
Or my opinions after three decades of experience, practice, research, and teaching  
A brief history of a scientific odyssey  
A Position Paper on Bleaching:  
Buyer Beware

Bleaching is a procedure which is designed to lighten the color of your teeth. Significant whitening can be achieved in the vast majority of cases, but the **RESULTS CANNOT BE GUARANTEED**. Bleaching, like any other treatment has some inherent risks and limitations. These are seldom serious enough to discourage you from having your teeth bleached, but should be considered in making a decision to have this treatment.

Bleaching, or whitening of teeth, has a long and interesting history, purportedly dating back to the 1880's and Thomas Edison's invention of the light bulb. As part of this very interesting scientific odyssey though life, I came prepared when I started practice to “bleach teeth” since some of the rural water wells in this county could cause severe Fluorosis, and the municipal water supplies contained enough Fluoride that, when combined with drinking tea, caused moderate Fluorosis in many children. (If you have children under six, do you know what your water's Fluoride content is?)

My first efforts came from information that curious young dental student gleaned from dentists who developed effective procedures in the 1930's. We tried numerous systems with varying degrees of success, with the end effect that we definitely could improve the appearance of severe Fluorosis. By the 1980's some innovative dentists found out that we could whiten teeth by using Glyoxide, an over-the-counter gel used to treat gum infections, placed in a thin, football type of mouthpiece. We had rather sensational results with this technology.

I literally couldn't give it away. When I offered to provide free bleach systems to a graduating class, the intended recipients were insulted.

Then along came some very innovative marketers in the 1990's, and we combined our experience with the low temperature soldering irons we used in the 1970's and various heat sources, thus the invention of “Power Bleaching” with a light source (we investigated standard high intensity curing lights, Plasma Arc Lights, and Lasers. Much of that technology originated here in Refugio). What we found was that we could achieve rather spectacular results in teenagers, but older patients, especially men, had enamel that was very resistant to long term effects.

Simplifying a very scientific explanation, what would happen in older patients was that when we applied the “Bleaching” solutions, the teeth would get significantly whiter, but that was an artifact more closely related to dehydration. Many older patients would leave the office with whiter teeth, but would lose several shades in a short length of time. Then one of the major research groups did a study, applying light randomly to one side of the mouth and not the other.

Result? Both sides got equally white, so why bother with the hype of “Light Assisted Bleaching”? To keep the results, I had to send the patient home with standard trays, so, Buyer Beware. Besides, the patient needs a touch up every six months or so to maintain the results, so the patient must have bleach trays for lasting results. Also, there are potentially beneficial side effects in the bleaching solutions applied after having your teeth cleaned every six months.

Next, the marketers figured out how to hook the patients into wanting white teeth, and the rest is history. “Marketing is convincing somebody that they need something they didn’t know they needed”, and the “Zoomathons” were invented. Attach a simple light guide to a ridiculously articulated monstrosity, swath the patient in protective armor, and now you have the “Wow” factor and demand that marketing creates. Buyer Beware.

Where we are today in our practice? Having been involved with researching and inventing most of the technology, we can do the “Power Bleach” procedure, if a patient begs, pleads, and twists our arm. My advice is to save your money, though, and spend it on custom trays, because you will need to touch up on a bi-annual basis. We can custom prescribe solutions that can help control sensitivity. Extrinsic stains block bleaching, so a uniform bleaching follows a thorough air polishing by your hygienist each cleaning appointment. What you pay for is the time, overhead, materials, and equipment it takes to build the trays, and the expertise in selecting solutions, not marketing hype.

Or, if you have little root surface exposed (the major cause of sensitivity when bleaching), you can do it on the cheap and live with less than uniform bleaching. Buy two athletic mouth pieces, and make sure the mouth piece covers the entire tooth surface you want to bleach. Buy Glyoxide over-the-counter, apply a small amount to wherever teeth you want bleached, and wear for no more than one hour. If teeth are sensitive, wait until they settle down, and start over with fifteen minutes of exposure. Repeat until you get the results you want.

If you want straight forward procedures with no hype, please contact us.

A longer, more complete version of this article will be available on the [www.TIADS.com](http://www.TIADS.com) website soon.

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