

Teeth Whitening: Effective or a Marketing Scam?

By Karen Wynne (2009)

Tooth whitening has become increasingly popular. “The primary goal of restoration dentistry is to restore the tooth to its normal function as well as provide the patient with an attractive appearance” (Byrd, 2002, p. 775). Restorative dentistry includes many procedures including amalgam restorations, composite resin restorations, intermediate restorations, resin restorations, resin veneers, and tooth whitening. Since tooth whitening is considered an integral part of general dentistry, I have chosen to explore this topic. It has a beneficial and important place in oral health. It has become increasingly popular during our last decade and a survey taken in 2002, by the American Dental Association and Colgate, showed that dentists said that the “fastest growing part of dentistry was teeth-whitening” (Marples, 2008, p. 2, online). There was a 25.1 % growth rate. I intend in this paper to argue that while teeth whitening is a positive and important option of dentistry, the over the counter whitening products are not equal to the dentist approved treatments. Furthermore, I intend to show that the industry that markets these products are preying on or taking advantage of people’s needs to have perfect smiles. I will explore why people want to whiten their teeth and how they can find an alternate solution to teeth whitening and other ways to boost their self-esteem.

The American Academy of Cosmetic Dentistry reported that bleaching procedures and teeth whitening has increased by more than 300 % over the past 5 years (Marples, 2008, p. 2, online). Cosmetic dentistry is very popular because your smile is one of the most important expression and eye-catching feature of your face. It can make a change in your teeth and it can

change the way you feel about yourself in a positive way. There are so many advances in dentistry and cosmetic dentistry that people do not have to settle anymore for chipped stained or poorly shaped teeth. There are many choices a person can make to enhance their smile, but tooth whitening stands out as a very increasingly popular way of greatly improving a person's face and looks. A person only has to look at before and after pictures of top models, actors and celebrities to see that these practices are in demand. Some of the celebrities admit that they enhanced their looks by bleaching their teeth or getting veneers. Many prefer to hide this fact to protect their image that everything about them is completely natural.

Bleaching has become available to most people and they can achieve this look by going to their dental office. If done by the dentist, he coats the teeth with a part hydrogen peroxide solution after protecting the gum tissue and teeth with a rubber dam and protective gel. Then a special high intensity light is put on them for about 30 minutes. The whole procedure takes about an hour visit at the office. This can take a few visits depending on the need of each individual's teeth. The dentist can also prepare an at home kit for you by making an impression of your mouth and making a tray. Each night at home for weeks (depending on the dentist's instructions), you put the bleach in the tray and cover your teeth with the upper and lower tray. The whitening effect is temporary and the bleaching process must be kept up similar to the way a person has to keep coloring their hair. Bleaching, if properly done enhances your smile as long as it is not overdone. Some people want to look like they've had it done but most patients want people to think they look better but they don't want to advertise that they have had work done. They want to subtly introduce the whitening to the world. Teeth can become sensitive to bleaching and it is always important to discuss this with your dentist. (Bird, 2002, p.776).

Cosmetic dentistry, bleaching is usually not covered by health or dental insurance so it can be a financial investment. The science and art of cosmetic dentistry is here to stay and we can expect better products and technique to keep coming out now and in the future. However, as popularity of teeth whitening has increased, the shelves of the drug stores, supermarkets and retail stores are filled with at home products designed and claiming to do the same thing as the professional dentist prescribed products. Proctor and Gamble Co. alone, has spent more than \$1 billion in the last 8 years on all forms of marketing and competitors have spent another \$200 - \$300 million. (Neff, on-line). Before I explore how these products work and whether they are as effective as they claim to be, I will attempt to explain why teeth whitening is so important to people. Why do we need to whiten our teeth? Is the selling market out there preying on this need and trying to persuade consumers of all ages that they must buy their product and restore their teeth in order not to feel exiled or alone? The manufacturers of teeth whitening products aim their advertising at young and even older people. The people that they target in their campaigns and brightly colored packages are made to feel that they need these products to feel good about themselves. Has all this gone one step too far? Why do these companies grab our attention and convince us that we all really must buy into their products?

I feel that one way to explain our needs in society is by quoting Eric Fromm's writing about the need to conform in his book *The Art of Loving*: He says

“...if I conform in custom, dress, ideas, to the pattern of the group, I am saved; saved from the frightening experience of aloneness.”“One can only understand the power of the fear to be different, the fear to be only a few steps

away from the herd, if one understands the depths of the need not to be separated.” “Most people are not aware of their need to conform. They live under the illusion that they follow their own ideas and inclinations, that they are individuals that they have arrived at their opinions as a result of their own thinking-and that it just happens that their own ideas are the same of those of the majority” “We need to conform, we do not want to be exiled and alone. (Fromm, *The Art of Loving*, 1989, p. 13)

“You’ve only got one chance to make a first impression... with a brighter smile, you’ll gain the confidence to use it more often, projecting a friendlier, more approachable aura” (“Top Teeth Whitening Reviews, online).

The current celebrities in all the magazines and ads have perfect teeth, radiant smiles. Many of them have veneers. We start to think we want this too, that this is how our teeth are suppose to look like and if they don’t they’re flawed. The marketing industry has taken advantage of this fact and the companies are putting out more and more products on the market and advertising them in magazines, TV ads, knowing that people’s need to conform to feel good will insure increasing profits and sales for these companies. They want people to buy them. Even in these tough economic times, they want people to think of them as necessities not just cosmetic luxuries. They show successful men and women in power suits and professional clothing flashing their bright and happy smiles. This technique helps brain wash the consumer that if they buy into the product they will more likely get a job, keep a job and succeed. They show people casually dressed and at play with their bright smiles preying on the

fact that people will feel most likely to have a happy, more pleasant home and life with their product. They also display young people at bars and social events with their perfect teeth and smiles that almost glow in the dark. This appeals to the people who want to have happy social lives and meet a man or women. This is the psychological propaganda that the media and advertising companies use to sell products. They are very convincing. Evidence of this is that “Americans spend more than \$1.4 billion a year on teeth whitening products” (“Looking Great”, p. 1 on-line).

There is a need in all humans to not feel lonely. This need is present in 2009. It was present in all eras and periods of history. Some examples of this need are seen in books we read, in literature of all ages. In the story Heart of Darkness, by Joseph Conrad, one of the many underlying themes was the need to not feel the sorrow of loneliness and exile. The narrator of the story, Marlowe, expressed this feeling when he started to believe that he might never be able to speak to Mr. Kurtz, the chief of the “Inner Stations” in the jungles of the Belgian Congo in Africa. When he realizes this might happen, he says “I couldn’t have felt more of lonely desolation somehow, had I been robbed of a belief or had missed my destiny in life.....” (Conrad, 2003, p. 107). There is a lonely, sad emotion that Marlowe experiences as he travels through the jungles into the “heart of darkness”, the deepest part of the jungle. He saw many greedy, selfish, white traders who lost their sense of right and wrong and abused and mistreated the black natives and used them as servants. The theme of isolation was there.

When I write about the perfect smile that everyone wants, there is a certain psychology of a smile. “The smile, is our fundamental social gesture and an essential tool in interaction”.

People who have had strokes sometimes suffer from paralysis of facial muscles and cannot smile. "Patients who regain at least some of the ability to produce a smile-...are far less likely to be suicidal than those who do not regain this ability." (Doundoulakis, 2004, p. XVI). These quotes show how much the teeth and smile is related to a person's inner feelings, to their confidence, their joy or their sadness, isolation or loneliness. The poet, Meena Alexander shares much of her sadness and the darkness and isolation that she feels in her soul. She expresses these emotions and shares them by using her poetry. In her book of poetry, *Illiterate Heart*, Meena Alexander writes many poems that are deep with meaning. They express how she feels isolated and a darkness clouding over her. I can hear it in so many of her poems. In the poem "Choric Meditation", she ends with the lines: "In the shade, someone whose face is turned away is crying out loud. I am your soul, she sings, her arms open wide. Your dark body alive press through the wall, into the humming station, swim in the black river. As if you were a girl again and find me."(Alexander, 2002, p. 25).

Meena Alexander writes with her poetry and expresses how she is searching to find herself, her identity. She is searching to find her soul. She spent her youngest days in India and loved her mother's home in Tiruvella, India, and at the age of 5 moved to Khartoum, in Africa with her parents. She spent most of her life in Manhattan after she married. Her poems reflect her loneliness and her aching to discover who she really is. It seems that her searching for her identity as she sees herself as the girl from India who is so far away from the gardens and water and trees of Tiruvella. She fights the loneliness and isolation that a black skinned Indian woman feels, the prejudice that so many women feel for being a minority, a woman in a man's world. Her feelings, her sense of exile is something most people feel in different degrees in their lives.

As I read her poetry I feel that I am looking into some of her sadness and darkness felt in her soul. She showed similar feelings again and again in so much of her poetry. In her poem "Indigo", she said: "Already, it's summer, clouds float in silk, I search for myself in the map of indigo" (Alexander, 2002, p. 35). In this poem, Meena is discussing a scrap of silk being dyed in a vat of dark indigo dye, probably the color of very dark blue, almost black in color. I think that she gets this image from a memory in India or Africa. She seems to be saying that she is looking at the pail of dark ink and searching for herself on the map of Indigo. The Indigo could symbolize her darkness of skin and she is searching for her own identity and who she is in the world of so many cultures and races in Manhattan, especially. But more importantly, I think it is another example of Meena just trying to find happiness.

All this sadness of characters and humans in literary works is relevant to why people try so hard to get the most beautiful, bright, teeth possible. They want to feel whole and happy. For many people, their teeth and beautiful smile is a ticket to relieving isolation, loneliness and darkness in their soul. The smile is "a number of things connected to health and self esteem...". "The perfect smile is about the way you tell the world who you are and what you're about". (Doundoulakis, 2004, p. VII). Meena Alexander's poems are also a way to tell the world who she is and what she is all about. I believe they help her self-esteem and make her feel better about herself. The perfect smile helps many people's self-esteem and they will go to a dentist or reach out on the shelf of a drug store for this key to happiness and a better identity for themselves. A beautiful smile helps shape how you feel about yourself. "The smile not only reflects the indomitable quality of the human spirit, but actually replenishes it. "Smiling helps us survive". ... "To not smile is to endure isolation and loneliness" (Doundoulakis, 2004, p. 1X).

When a person is ashamed of their teeth, they feel unattractive and want to correct this by whitening their teeth. They want to look great but they want to go beyond makeup or beautiful clothes or a toned body. They want to have a gorgeous smile. This smile can be the door to feeling better inside. These feelings come in many forms. Some people feel it because they have unattractive teeth and they feel set apart from other people. They might not smile confidently because of their shame about the teeth. The lack of smile tends to disconnect people from other people further enhancing their loneliness, sadness and sets them apart from people. Feelings such as these are enough to give people the blues, a sense of depression. It is amazing how much importance a smile can have or so we think.

The advertising industry goes to extremes to take advantage of the lonely people that want to fit in, that want that smile that will win people over and will insure us against exile. The industry cashes in on this need in people and many whitening products have been introduced to the market. They sit on the store shelf and confuse us. If the product does not do everything that it says then people are being taken advantage of.

If one takes a look at the different products that can confuse the consumer, they will find a variety of price and types of whiteners. The best way to start the decision is by researching and talking to your dentist. In order to judge whether they could possibly work it is important to know the composition of teeth whiteners and how it does its job. ("The Sneaky Home Whitening Secrets", online).

Teeth become stained and discolored from extrinsic stains from foods, coffee, tea, soda and cigarette smoking. Aging discolors teeth, as does intrinsic stains from use of tetracycline or

too much fluoride. (Bird, 2002, p. 88). In order to remove extrinsic stains teeth whitener is used. What ingredients are in these magical products that we need to make our lives more fulfilling, happy and successful? How do they work? Teeth whitening is a process of lightening the color of teeth by bleaching. It works best on teeth that have no caps or fillings. It has been done by dentists since 1989, and dental studies have been done since 1989 to study effectiveness and safety. One of the results of these studies is that laser whitening and at home trays custom made by a professional dentist are found to be safe. ("Teeth Whitening: Are 10% Carbamide Peroxide", online). They have been tested over time. But how do we know which over the counter products, new ones being produced and introduced all the time, are safe and which ones really work? Another thing to know about the whitening techniques is that most effective teeth whitening is done with peroxide. There are two types: carbamide peroxide and hydrogen peroxide. The peroxide breaks down, allowing oxygen into the enamel of your teeth, bleaching them. ("Carbamide Peroxide, Hydrogen Peroxide, Calprox", online). The higher the concentration of peroxide, the more whitening is done, but the best strength of peroxide is the one recommended by dentists. The more common and best peroxide used in today's whitening process is carbamide peroxide which is urea combined with hydrogen. Urea is an "aqueous solution" Carbamide peroxide is found in tooth whitening formulas administered by professional dentists, teeth bleaching gels, also the tooth whitening gels that are activated by lights. Whitening strips, paint-on whiteners and whitening mouth rinses generally do not contain the more effective carbamide peroxide. Instead they usually only contain hydrogen peroxide.

Dentists use carbamide peroxide rather than just plain hydrogen peroxide because hydrogen decomposes faster than carbamide peroxide, so the whitening effect is not on the teeth long enough to produce the best results. Hydrogen peroxide molecules “break down pigmental compounds in a tooth’s enamel into colorless byproducts, thus producing a lightening effect” (“Teeth Whitening: Are 10% Carbamide Peroxide”, p. 1, online). When you use carbamide peroxide if water is present, the compound can break down into parts and the hydrogen peroxide is free to do the whitening work. It is more stable than hydrogen peroxide alone. Therefore it stays fresh and usable longer and it doesn’t break down so fast in the mouth so the whitener stays in the mouth longer to do the job more effectively. So it gradually whitens teeth and produces less side effects because of the gradual more timed release.

The dentists for both in-office and take home kits use 10% carbamide per concentration. This is the percentage that has been tested and known to be safe, if used with the tray-based whiteners and used as directed by the manufacturer of the solution and dentist. Because peroxide breaks down to form free radicals molecules, questions have been asked: can these free radicals cause cancer of the soft tissue of the mouth? The answer is that if a person uses the dentist monitored at home teeth whiteners with 10% carbamide peroxide, the studies show no cancer risk because of three things: the saliva in the mouth neutralizes the peroxide enough to prevent this; the actual amount of hydrogen peroxide that is produced by these whiteners is around 3.5%. Studies have shown no dangers with this amount of hydrogen that is released; the custom bleach trays that a dentist makes has minimal contact between the person’s gums and tooth whitener. Another question that one should ask is: will tooth enamel be worn and damaged by the whitening process? Studies have shown that minimal or no damage is done at

all to the enamel and they go further to say that fruit juices and soda can cause greater erosion or damage to the tooth enamel, than whiteners would. (“Teeth Whitening: Are 10%”, p. 2. online). Another consideration to note is that if a person has caps or veneers they will not be lightened and therefore will stand out even more than whitened teeth. Of course, whitening should not be done by pregnant women because the effect of the whitening materials on the unborn fetus’ development is not yet known. (“Simple Steps to Better Dental”, p.3. online). Also teenagers should not whiten their teeth until they are between 14-16 years because the nerve of the tooth, the pulp chamber, has not fully developed yet and it could be irritated and cause sensitivity within the tooth. (Swain, p. 2, on-line).

From this research it is possible to conclude that if you are going to whiten your teeth you can be assured that it is safe to whiten them under a dentist’s supervision, at the office or using a custom take home kit from a dentist. All these methods are approved by the ADA.

Many people are using the at home products that are being sold over the counter. Are these in-home whiteners and kits as effective as the in-office procedures and trays already prepared by a professional dentist? How can a person know if they work, if they are safe?

The first thing to do is make sure that they are accepted by the American Dental Association. I researched many products on the shelves of retail stores and I discovered that not one of them was approved by the ADA. In my research I found that all the products from \$3.99 up until \$42.99 and higher, all claim to whiten and brighten teeth to some degree. It is hard to believe especially when I look at this quote on page 11 of “the Art of Being” by Erich Fromm.

“Perhaps the most difficult obstacle to learning the art of being is what I would call the “great sham”Phenomena such as products that are overpriced or actually useless if not harmful to the buyer, advertising that is a blend of a little truth and much falsehood, and many other social phenomena are art of the great fake”.... “their real value is covered up by the value that advertising and the name and greatness of their producers suggested. How could it be otherwise in a system whose basic principle is that production is directed by the Interest in maximal profit and not by the interest in maximal usefulness for human beings?”

(Fromm, The Art of Being, 1989 p.11)

So are all the manufacturers of at home products for teeth trying to fool us, the public? Are they putting products out there on the store shelves that are not going to perform as they claim? My research is leading me to believe yes, there is a “sham” going on. Yes, the teeth whitening companies are more interested in generating a profit than in making a useful product.

Some of the retail products out there are Shoprite Whitening Wraps with stay in place upper and lower strips to use 30 minutes each day for 7 days. They claim to make teeth visibly whiter in 7 days for \$16.99. Next was Crest advanced seal white strips advanced form fit, no slip. It has a 14day supply for \$38.99. There was Crest Whitening Plus Scope toothpaste plus scope toothpaste at \$3.69 for 6.2 ounces. Another item was Rembrandt whitening toothpaste, 3.0 ounces for \$6.99. Also Crest weekly Intensive Cleaning paste, it polishes teeth with ingredients similar to what dentists use (according to the package). There were 16 uses for

\$37.99. A consumer has to research and educate himself if he or she wants to use the home products. First you should check the product and see if it has no more than 10% carbamide peroxide.

Some other products that I checked were Listerine Whitening Pen priced at \$12.99 for on the go whitening. The instructions on the box tell you to apply the pen to the teeth with no need to rinse or remove the solution. The claim is that it noticeably whitens teeth in 2 weeks. Listerine Whitening Quick dissolving strips boast of easy whitening in two weeks-it dissolves on teeth in 5-10 minutes, you get 56 strips for \$19.99 and hydrogen peroxide is an active ingredient.

Plus white 5 minutes speed whitening is a whitening and brightening system. It says it will begin to work with the first application and you will see whiter brighter teeth within days. It removes plaque, which allows the gel to lift away the stains more effectively. This costs \$6.69 for 3 ounces. Hydrogen peroxide is one of the active ingredients. Of all the products that I researched so far, the only one that has more than just hydrogen peroxide is called Luster Hour White. It has urea peroxide as an ingredient. It does not list this ingredient as carbamide but it sounds like the same thing. Therefore I conclude that it could possibly be more effective than all the other retail products so far. It claims to be one hour tooth whitening light system. It says that it whitens teeth up to 6 shades in one hour and has similar technology to dentist light treatment. It says FDA cleared. My problem with this is the product does not list the percentage of urea hydrogen and does not list ADA approved. The light provided is run by 4 AAA batteries.

I feel that this is the only product that might have a chance of producing worthwhile results based on the fact that it contains urea hydrogen peroxide and carbamide is the preferred and most effective ingredient. But I have no assurance of its safety! None of these products carry the ADA seal, so one still cannot feel comfortable buying them. Since all but one contain only hydrogen peroxide, I conclude that the real “sham” is that they probably won’t work very well for any length of time. Even the product Luster had a battery powered light to be used for only 2 minutes. It cannot possibly work in such a short time. Another down side of any over the counter product is that “when peroxide is left on the gum area for too long not only can the area become sore and sensitive, but the gums can start to recede and separate from teeth, not an easy situation to remedy. (Levine, 2006, p. 152).

I have pointed out that carbamide is the preferred and most effective ingredient in tooth whitening. Not one of the products lists the percentage of peroxide. Coincidentally, in my research I found that a different survey of 8 over the counter products was taken and written about in Consumer magazine reports, August 2009 issue, and they also found that “none of the products we tested was labeled with the peroxide percentage”. (“At Home Tooth Whiteners Differ in Effectiveness”, p.11. online). So far, the research has convinced me that most of the over the counter products don’t necessarily harm the teeth but there is no assurance of that. Also, any whitening products, if left on longer than recommended, may raise your risk for gum infections. (Giordano, 2009, p.96, on-line). Based on the fact that hydrogen peroxide used alone without urea leaves the mouth quickly, it stands to reason that these products may give a clean bright smile but that is about all. If you add up the price of an application it seems as if you are paying for a glorified teeth cleaning kit. They are expensive and there is no criteria to

judge if they are safe or harmful or if they work. Again, I found similar information to support my findings: “Because whitening gels are not regulated, you have no assurance that they are effective or safe. While most use the same ingredients as the professional systems, they are not as strong and usually do not work as well. One of the biggest problems with OTC whiteners is that some are made too acidic in order to stabilize them, which can cause permanent damage to the surface of your teeth. Professional products have a neutral PH so they are safe”. (Dorfman, 2006, p.122).

Lastly, a quote from the book, “Change Your Smile”, gives further proof to my conclusion that the marketing industry is preying on people’s need to enhance their smile by the words “Most over the counter products disappoint consumers because they fail to provide more than a temporary removal of surface deposits on the teeth.”... (Goldstein, 1997, p. 37).

Alternative ways of boosting a person’s self-esteem and whitening a person’s teeth naturally can be explored. There are ways to brighten your teeth and boost your self esteem that are natural, not risky and will not be expensive. (“Tooth Whitening and Bleaching Whiteners”, online). Tooth whitening is indeed a wonderful confidence and appearance booster and has it’s merits when supervised by a dentist. I believe that the whitening industry has used the popularity of this cosmetic dentistry and preys upon the people who crave to better themselves. There can be alternatives to the expensive kits and chemical products on the market.

I found some homemade remedies and some look good while others sound risky. One recipe has the ingredients of ground charcoal, sugar, salt and honey. You rub this on teeth and

then rub a teaspoon salt and a teaspoon of fresh lemon juice. Then rub orange peel on the tooth. Then, there is a very old method for whitening where you mix 1 teaspoon baking soda and a few drops of hydrogen peroxide and use on teeth twice a day. Another remedy is 3 teaspoons baking soda, 1 teaspoon table salt and brush the same way that you would use tooth paste. Also I found a method where you rub the bark of a walnut tree on teeth daily. An interesting process that I discovered is to take a piece of aluminum foil and wrap it around your teeth and make a homemade tray. Then mix some baking soda in your store brand toothpaste, spread it in tray. Then leave it on for a while and then brush teeth as usual. This can be done twice a week. I also found out that you can rub sage leaves on your teeth daily. ("Tooth Whitening and Bleaching Whiteners"p. 2, online).

People have searched for many years for the solution to erasing tea, coffee and other teeth stains. Natural remedies were "invented" long before the cosmetic whitening became popular. One of the first ways to whiten teeth is to quit bad habits that contribute to staining the teeth, such as drinking wine, too much caffeinated drinks, and smoking cigarettes. Also, it is wise to brush teeth immediately after eating dark fruits such as blueberries. People are so busy trying to find ways of whitening and brightening their teeth when the most basic start is to eliminate the culprits that do the most damage to the color of teeth. These habits are very harmful to the natural beauty of your smile.

Next it is important for one to visit the dentist every six months for a checkup and a professional cleaning. That would be a good time to discuss alternative natural remedies with a professional and check out the safety and possible harmful effects of these at home remedies.

As I searched for home remedies, I noticed that brushing teeth with lemon juice or rubbing lemon peel across the teeth was not a good choice after all. I discovered that the citric acid in lemon juice takes away calcium from the tooth enamel, because you disrupt the balance of calcium in tooth enamel and the enamel can be “damaged” beyond repair. So I feel that although tempting, I would advise people to stay away from this method. (“All the Information You Need” p. 2, online).

Another natural remedy is brushing the teeth with mashed strawberries. The seeds could scratch the tooth enamel and the acid could also rob teeth of calcium, so if a person does this method then they must be sure to brush their teeth thoroughly afterward. (“A.C. Associated Content Health”, online). Eating crunchy vegetables like broccoli, carrots, cucumbers, and celery is another way to whiten teeth because the natural abrasion helps scrub off stains. (All The Information you Need, p.1, on-line).

It also turns out that the hardwood ash from a tree has potassium hydroxide in it and I read that potassium can also erode enamel over a period of time. That is not a choice that I would recommend. Out of all the natural remedies, I found out that the safest and most effective ones are: brushing teeth with baking soda and salt mixture, and rinsing with hydrogen peroxide. The baking soda actually kills bacteria and since bacteria causes plaque this is effective to fight and remove stains. Baking soda is also found to reduce acids so tooth enamel can stay unharmed. Rinsing with hydrogen peroxide is stated as a safe and effective whitener but my resources remind me that this is not as concentrated as the peroxide found in

professional teeth whiteners, so it won't bleach as extensively or produce those same shades of whiteness however it is safe.

"This may be one of the best home remedies for teeth whitening and regular tooth maintenance". ("All the Information" p. 2 online) I found this information about mixing baking soda and hydrogen peroxide.

A simple recipe that I found online was : Mix a few drops of hydrogen peroxide with 1 or 2 teaspoons of baking soda and brush teeth. If a person is rinsing the mouth with hydrogen peroxide they must always mix 50% water with 50% peroxide and make sure that it is food grade peroxide, so that it is safe to use in the mouth. Also a person should never swallow hydrogen peroxide. It is recommended to rinse the mouth again with plain water after using the hydrogen peroxide rinse. ("Simple Natural Teeth Whitening Baking" p. 1 online).

One other home recipe that I came across was mixing 6 teaspoons baking soda with 4 teaspoons glycerin and then 1/3 teaspoon salt and 10 drops of peppermint extract. This recipe promises a "difference in your teeth" and can be stored in a jar for future use. ("Simple Natural Teeth Whitening Baking" p. 1 online).

Your smile is the first thing a person notices when they meet you, look at you and talk to you. It comes as no surprise that I could find so much material on both natural and chemical teeth whitening processes. I have learned so much information as I have been researching and writing this paper.

I did not know that there were natural ways to whiten teeth that might actually work. I never realized just how harmful some of the chemical processes can be.

Another way that a person could boost their self esteem would be to keep teeth as clean and attractive as possible and even if they could not afford the professional method of whitening at the dentist, they could have a chance at having an attractive smile. They also could eat well-balance meals, exercise and take vitamins and try to stay all over healthy for a more confident feeling inside.

In order to fully research the tooth whitening process I interviewed someone who has experienced it. A 57 yr old female from Portchester, New York traveled by train and met me on Wednesday, July 8, 2009 for an interview. Our scheduled meeting place was a restaurant on the Upper East Side of Manhattan, where we would have time to talk about her experience with a whitening product she had used advised by her dentist. The product was DayWhite it's a 9.5% of a hydrogen peroxide gel and she was prepared to share her history of this process.

After we ate dinner, we had coffee and conducted the end of our talk. The reason I picked this place was that I felt we would have enough privacy and a place that was not too loud so that we could hear each other clearly. The weather cooperated and did not rain for once so we were able to walk around afterward. I had my list of questions available so that I would cover all aspects of her cosmetic dentistry experience. In the year 2001, she first started whitening her teeth. She did it the correct way in the beginning. She visited the dentist and he custom made a mouth tray for her to take home. An impression was taken of her mouth at her

first visit and on the second visit the dentist gave her the tray with the whitening gel. She took it home with thorough instructions on how to use it.

She put the tray on with whitening gel twice a day for 30 minutes at a time. She did this routine for three weeks and then she tapered off to once a month at 30 minutes for the next few years. Currently, she has eased to every two months. She does this because she is afraid that if she stops her teeth would go back to the color that they were before whitening.

I asked her what side effects there were. Obviously the treatments worked, because her teeth look natural and white, clean and beautiful. She told me that there were no real side effects that she can remember until about three years ago when she started noticing her teeth being sensitive to hot and cold temperatures. She said that she definitely experiences sensitivity whenever she drinks something very hot and extremely cold. She does think that this is directly related to the whitening process, but she is willing to put up with it. She stated that she always picked up the solution prescribed and recommended by the dentist until about 2 years ago when her dentist switched brands and he no longer ordered and gave out that brand whitening gel. He was using a different brand and would not say why he changed it. Rather than try a different product, when she knew that the original worked well, she found the original brand online and has been using it ever since. My final question was: so you regret whitening your teeth? Do you think you have done something that could have altered or harmed your teeth over a long time period? She replied that it was and is worth it to her. She does not regret it and it has made her content and happy with her looks and that means a lot to her. "It was worth the risk, I am a little nervous about the sensitivity and I hope that it does not

increase but I am not wasting time worrying about it. I made my decision and I am not changing it now. The white smile is worth it to me”.

After the interview, I could not help thinking about some of the quotes that I observed in the literary books that were used for researching my paper. In the ART of Being by Erich Fromm, I noticed a quote: “We are happy if our wishes are fulfilled, or, to put it differently, if we have what we want”. (Fromm, The Art of Being, 1989, page 2). If you really think about it, the women’s whitening experience is making her happy. White teeth, 5 shades whiter than before she started this process, is what she wanted. She feels good about herself and the way her teeth appear to be so clean and healthy looking. She is aware that there could be some danger in long term use, based on the fact that she has the teeth sensitivity. I can’t judge her. I can only learn from this interview that this is very important to her and worth the risk to her.

The women’s attempt to whiten her teeth is part of her searching, as we all do for something to make herself feel complete and that she feels makes her look great to the people around her in her world. I think that it’s really about how she and we all picture our selves and our self-image to the world. If this woman I interviewed and other believers of whitening think that they feel good inside, then it completes part of their need for happiness. This is what I keep concluding is that there is a need in people that the teeth whitening industry has noted and has acted on.

I did walk away from this interview wondering why her Dentist discontinued using her original whitening solution and why was he now recommending another brand? I was left with

the feeling that she ended up using a product that has altered her teeth or gums in a gradually harmful way.

I feel that I have thoroughly examined what exactly teeth whitening is, how popular it is, why it is so popular, why people do it, and what chemicals these products are made of. I have shown that while professionally supervised whitening administered and endorsed by your dentist is very beneficial, the at home products are not what they claim to be. I have shown that they are not guaranteed to be safe and can be a risk. I am convinced that the commercial whitening industry has taken advantage of and fooled the public and prey on their needs in order to sell their product. I was even further convinced of this theory after my interview.

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You brush your teeth and floss on the reg. You've tried everything from the latest toothpaste to whitening strips, gels, and trays but nothing seems to give you that 100-watt smile. So what's the best way to get gleaming pearly whites? According to Pinterest and YouTube, the path to whiter teeth is covered in a pitch-black paste. Bloggers and vloggers claim that brushing with activated charcoal is an all-natural way to remove surface stains caused by coffee, tea, or red wine without bleach or abrasives. We checked in with dental professionals to find out whether activated charcoal is a safe and effective way to whiten your teeth or if it will just leave your mouth full of dust. Activated Charcoal: The Whitening Promise. "Activated charcoal has been used for many things. Home Teeth Whitening Teeth Whitening Scam Company Sells Defective Teeth Whitening Gel. Teeth Whitening Scam Company Sells Defective Teeth Whitening Gel. Teeth Whitening. May 12, 2010. 0. ©Kurhan/Shutterstock.com. This makes the gel weak and the whitening less effective. The news reporter tried out the White Overnight system and even used a shade guide from a cosmetic dentist's office to benchmark his results. Unlike the promises in the advertisement, he found that his teeth didn't get much whiter after a week. However, the CEO of White Overnight seemed to think that the reporter's teeth were pretty white! The CEO's of this teeth whitening scam company weren't even trained in the dental field. They are former Los Angeles rockstars.