

**NIGHTGUARD VITAL BLEACHING
(DENTIST-PRESCRIBED, HOME-APPLIED)
INFORMATION AND CONSENT FORM
Dr. Van B. Haywood**

VBH edited 2-00

This tooth bleaching/whitening technique uses a custom-fitted soft mouthguard (prosthesis), and peroxide-containing whitening agents. There are two regimes for the application of the whitening agents: sleeping with the prosthesis loaded with the material; or wearing the loaded prosthesis during the day. Night wear uses one application at bedtime; day wear uses 1-2 applications of 1-2 hours duration, but not immediately following one another. Treatment time is generally 2-6 weeks. Either or both regimes may be used, depending on the type of material prescribed by the dentist. The more times or longer the solution is applied, the faster the bleaching occurs (much like obtaining a sun tan). However, faster bleaching may invite side effects of tooth or gingival sensitivity. The limitation to the amount of wear-time will be determined by the mouth's response to treatment. Excessive extended wear beyond the prescribed treatment time should be avoided. There is no reason, nor is it desirable, to continue treatment with "touch-up" or periodic applications unless there is an obvious relapse of the color change.

Prior to its introduction into the dental literature in 1989, this technique had been used for patient care since 1968. Laboratory studies published have shown no significant detrimental effects on teeth or restorations, and animal/tissue studies have shown no detrimental effects systemically or on oral tissues. However, it is advisable to cease smoking or the use of other known carcinogens during treatment. Human clinical studies have shown 9 out of 10 patients have a successful experience. Most persons experience some lightening of their teeth, even if it may not be to the extent they desire. However, not all patients are responsive to the treatment, and not all patients respond at the same rate. The only way to know at this time whether or not your teeth will respond to the treatment is to attempt the treatment, with no guarantee of success. Some patient's teeth get very naturally white, while other patient's teeth (especially those stained by the antibiotic tetracycline) get lighter but retain a gray color. Other patient's teeth do not change much at all. Tetracycline-stained teeth are the least responsive, brown-fluoresced teeth and single dark teeth respond moderately, and teeth discolored by age, genetics, smoking or coffee stains are the most responsive to bleaching. Teeth in the two "less-responsive" categories often require an extended treatment-time to achieve the maximum benefit, which may only be a lightening of the same color of the teeth. White spots are not removed, but may be less noticeable. There is no noticeable color change in composite restorations or crowns, so these restorations may need replacement for proper color-matching after the treatment. If you have many restorations that show in your smile, the fee for replacement of these existing restorations may be a contra-indication for bleaching treatment.

Two common side effects have been noted by researchers in approximately 2/3 of the persons using this dentist-prescribed, home-applied bleaching treatment:

1. The most common side effect noted (1/4-1/2 patients) is that some teeth may be more sensitive to temperature changes during treatment. However, sensitive teeth return to normal when treatment is terminated, and no long-term effects noted from this sensitivity (7-year recalls). Should the teeth become too sensitive to continue treatment in the proposed fashion, treatment should be discontinued and the office contacted. Often, reduction of the amount of treatment time per application, or reduction of the frequency of treatment applications will reduce or alleviate the sensitivity such that the bleaching treatment may still be continued. Occasionally other materials such as fluoride or desensitizing agents like potassium nitrate may be applied with the tray to reduce sensitivity. These applications may alternate with bleaching, or be 10-30 minutes before or after bleaching as needed. Brushing with a desensitizing toothpaste may be helpful.
2. For 1/3 of patients, the peroxide solution may initially cause some tissue irritation on an isolated portion of the gums. Irritation also can be due to mechanical causes, as well as chemical causes. Irritations usually occur in the first week or two of treatment. Chemical irritations may resolve in 1-4 days without cessation of treatment. Should the irritation be too uncomfortable to continue bleaching, treatment should be discontinued, and the office informed of this circumstance. For the first-time occurrence, treatment will be stopped for one day, after which the prosthesis can be re-inserted and the treatment continued. If the

irritation persists, an office visit may be needed. Mechanical irritations may require altering the shape of the prosthesis, or the technique of removal. Occasionally a new impression will be made and a new prosthesis will be fabricated, but at no charge to you.

The major limitations to wearing time are personal preference and the incidence/magnitude of tissue irritation/tooth sensitivity. However, some persons do not like the taste, while others cannot sleep well with the prosthesis in place. There are no age limitations. Older person's teeth respond well, although some root surfaces do not lighten much. Generally children in the 10-14 year-old range comprise the lower limit of treatment. Bleaching is generally not indicated on primary teeth (milk teeth) except in trauma instances. Treatment has not been recommended on pregnant women or nursing mothers because there is no reason to prescribe an elective procedure in the face of their more important responsibilities. If you become pregnant during bleaching, there is no indication of any harm to the baby. However, treatment will be stopped due to changes occurring in the body from pregnancy, such as gingivitis or nausea. Most often the limitations for bleaching are the amount of restorative treatment that would be necessary to be replaced should the bleaching be successful, the severity of tooth sensitivity, or the taste. You, the patient, must also take responsibility to apply the material at home for it to be effective.

Other methods have been used to alter the color of teeth. These involve the following: 1) the use of hydrochloric acid and pumice to abrade a portion of the discolored enamel (micro-abrasion); 2) applying a caustic solution of 30% hydrogen peroxide under a heating lamp, light or laser for 30 minutes for up to six visits (in-office bleaching); 3) performing root canals on the teeth and bleaching them from the inside out with sodium-perborate or 30% hydrogen peroxide (walking bleach); 4) removing some of the enamel and placing composite bonding; 5) removing enamel from the entire front of the tooth and placing ceramic veneers (or false fronts, like artificial fingernails) on the faces of the teeth, or 6) crowning (capping) the teeth. All of these treatments are much more invasive, time consuming, and costly than bleaching. This bleaching technique is a more conservative possibility available to the profession at this time. All other options are still available should this bleaching not be successful.

Completion of the bleaching treatment generally will require three appointments. The initial appointment consists of an examination, including a medical and dental history, and determination of the probable cause of the discoloration (aging, drug-induced, genetic, smoking, fluorosis, etc.), as well as the prognosis of this treatment. This examination often requires radiographs (x-rays) of the anterior teeth to determine the absence of any periapical pathology (along with electric pulp-testing of questionable areas), as well as to establish the baseline for treatment (such as identifying the pre-treatment condition of shortened roots, mismatched pulp chambers, etc.). Other causes for discoloration, such as non-vital teeth, caries, internal resorption, or discolored restorative materials, will need a different treatment procedure. A soft tissue exam identifies any lesions present, and the general nature of the gingival health and morphology. Patient expectations and habits, as well as consent forms and informative literature, will be discussed. Advisement as to the need for replacement of other esthetic restorations will be determined. There are certain unknowns or questions about this procedure at this time, especially as to its safety and longevity. Concern has been expressed about the long-term use of a material containing hydrogen peroxide. However, recent literature indicates that this form of dentist-prescribed, home-applied bleaching, when preceded by a proper examination and correct diagnosis, applied with a properly-fitted prosthesis and monitored as needed by a dentist, is as safe as other accepted dental procedures or commonly ingested foodstuffs. The average duration of color change appears to be 1-3 years, although it may be permanent. Re-treatment usually requires only 1-4 days. An impression of the arch to be treated will be made, as well as photographs taken at the first appointment.

Only one arch (top or bottom teeth) generally will be treated at a time. This protocol maintains the other teeth as a standard for comparison to determine the ongoing effectiveness of treatment, and minimizes side effects. One arch treatment will indicate whether or not treatment of the other arch is necessary, or desirable. If one arch does not lighten satisfactorily, the fee for the other arch is avoided. If one arch will lighten, the other arch will also, although the lower arch does not lighten as well as the upper arch. You do not have to lighten the opposing arch if you do not desire to do so.

The fee is due at the impression appointment, and cannot be waived if treatment is discontinued voluntarily or due to side effects. Should the prosthesis be lost or destroyed, there generally is a charge for replacement. If a removable partial denture is present and you desire to wear the guard both day and

night, two impressions, with and without the RPD, will be made to fabricate two prostheses. One prosthesis will be made for daytime with the RPD in place, and one for night-time use with it removed. There will be an additional fee for the second prosthesis.

The second appointment involves inserting and fitting the prosthesis and evaluating the occlusion (bite). The bleaching solution will be dispensed along with instructions for use. Only a small amount is needed in the tray to be effective. A case will be provided in which to store the prosthesis when not in use. Photographs will be re-taken if needed. If the taste of the solution is unpleasant, a Q-tip dipped in a mouthwash (such as Scope®) and dabbed on the tongue after insertion will minimize the taste. Avoid scratching the gums (gingiva) with long fingernails during removal of the prosthesis, especially in the canine (eye tooth) area. The prosthesis is best removed by grasping the rear on one back side of the mouth, and "peeling" out the prosthesis.

The treatment will continue until the desired shade is achieved, or six weeks has passed, whichever comes first. A follow-up third appointment will determine whether the bleaching was successful, or if it is desirable to continue treatment. Some discolorations require 2-6 months of nightly treatment, and may have monthly recall appointments. The final appointment may include photographs, a decision as to whether to treat the other arch, plans for restorative needs, and instructions for future needs. Re-treatment at a later date using the same prosthesis is an option if there have not been significant changes in the teeth. However, it is the responsibility of the patient to maintain possession of the prosthesis. The patient should contact the office prior to re-initiating treatment, both to determine the adequacy of the fit of the prosthesis, and because occasionally discoloration will be an indication of some other problem not treated by bleaching.

Any other types of bleaching or lightening procedures that might be considered in addition to this technique would involve a separate fee. Some teeth that are not responsive to this technique alone may benefit from an additional in-office treatment, followed by the return to this technique for a longer time.

"I understand and accept the conditions and limitations of this treatment"

_____ Patient Signature _____ Dental Provider _____

_____ Date _____

Please answer the following information:

1. What is the chief cause for the color of your teeth?
 - a. inherit staining (always been that way)
 - b. aging (noticed the change over time)
 - c. tetracycline staining (took prior to 8 yrs old, or for acne)
 - d. unknown

2. Have you tried any other treatments on your teeth? NO YES
If so, what? _____

3. What would you consider a satisfactory result? _____

NOTES: Examination _____ Impression(s) _____ Photographs _____ Radiographs _____ Instruction form _____
Prosthesis design _____ Material used _____ Recall _____ Arch treated _____ Comments _____