

Dentist-Preferred Method of Tooth Whitening

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I often tell my patients to think of teeth as a set of filters that protect the nerves or pulps of the teeth. Our diet, and habits cause our teeth to stain and darken from the prolonged exposure to these substances. We do not think of tooth enamel and dentin as being porous, when in fact they are. Coffee, tea, wine and smoking are all thought to stain our teeth, by getting caught on the surface and in the pores of our teeth, clogging the filters and causing the teeth to change color and darken over time.

Tooth whiteners utilize the oxidizing agents hydrogen peroxide or carbamide peroxide. Either of these active ingredients will penetrate through the pores of the teeth and bleach the internal deposits. Three factors are thought to impact the effectiveness of tooth whitening: the type and concentration of the product, the amount of time the product is in contact with tooth structure, and how quickly the product degrades once in contact with the tooth.

Over-the-counter products are safe and can be effective if used long enough. Most users of these products don't have their dentist diagnose the cause of discoloration or evaluate the efficacy of the product prior to use. The concentration of whitener in these products is low in order to make them safer. They work well but require more use to produce the

desired effect.

On the other side of the spectrum is the marketing-driven laser or light-activated whiteners. Researchers have questioned the value of using lights or lasers because some of the effects produced by these methods are due to tooth desiccation. The real active ingredient in these products, a high concentration of Hydrogen peroxide, may require special precaution during each application, and the potential for adverse effects is higher with this method.

So what is the "preferred" method of tooth whitening? The Pankey Institute is an advocate of the dentist diagnosing and screening patients for bleaching prior to the initiation of treatment. Once a patient is found to be a good candidate for whitening, impressions are taken of the teeth and custom trays are fabricated of thin, flexible material to fit over the



Dentist-fabricated custom bleaching trays made to fit the patient's teeth assure the bleaching gel comes in proper contact with the tooth surface.

teeth. The dentist then supplies a recommended bleaching gel and instructions for the patient to put gel on the inside of the trays and wear them for a specified number of minutes for a specified number of times.

It is up to the dentist and the patient to talk about the expected outcomes and desired effects as part of the screening interview. The dentist will take into consideration the patient's age, history of tooth sensitivity, dental history, and the amount of time a patient is willing to devote to the at-home treatments, when selecting a material to prescribe.

Since the dentist-supplied products are office-dispensed, they generally contain a higher concentration of hydrogen peroxide and will work quicker than over-the-counter materials. Due to this higher concentration, they may produce more tooth sensitivity or gum irritation. Both side effects have been shown to be reversible if the product is discontinued for a short time.

Your dentist may also recommend a desensitizing rinse or a fluoride gel to minimize any discomfort. This method produces very predictable results while minimizing potential side effects. It should be considered as the "preferred" method of tooth whitening. ■