

## 10 Basic Facts You Need to Know About Tooth Bleaching

- 1. Vital tooth bleaching is safe.** This service has been performed for over 20 years with vital nightguard bleaching proving to be safe and effective since the late 80's.
- 2. Side effects are minimal.** Reports of tooth or tissue injury in the literature have been few, and are mostly limited to pulpal inflammation due to excess heat from older wands and heat lamps, to reversible and transient tissue burns with higher concentration in-office products. Modern lights are fabricated to keep pulp temperature rise at a minimum, and properly placed gingival barriers reduce transient tissue burns. Tooth sensitivity is common, transient, and discussed later.
- 3. Bleaching is NOT a surface phenomenon.** Bleaching teeth occurs through free radical production from the dissociation of unstable hydrogen peroxide molecule through contact with moisture and heat. It is NOT a surface "acid" that "eats off stains," but rather a radical releasing substance that goes immediately between enamel prisms and into deep dentin and the pulp within seconds of contact. These radicals seek stabilization by attacking long chain stain/pigments, breaking them up into less dense, less organized stain molecules. The longer the contact with the stain molecule, and the more radicals available to continue breaking it down, the lighter the tooth becomes. **This is a time and concentration phenomenon.** Regardless of bleaching modality used.
- 4. Bleaching can last for years.** Studies show that because bleaching changes the internal and external color of the teeth, results can be stable for up to 2 years or longer. Of course this depends on patients habits such as consumption of chromagenic substances such as tobacco, colas, tea, coffee, red berries etc...
- 5. Not all stains are created equal!** Extrinsic stains break down first, deeper intrinsic stains take longer. Yellow/orange stains break down faster, while gray/brown stains take longer. Nearly all teeth will lighten over time... but diligence and compliance is required. Remember, differing stains can exist in the same mouth, and variability does exist in terms of efficacy. Inform your patient of this, and let them know that if they are unwilling to assume the risk of unresponsive teeth, they must chose more invasive, definitive treatment alternatives such as veneers or crowns.
- 6. Bleaching is NOT dangerous to enamel.** Bleaching does not significantly alter enamel. Minor alterations to surface smoothness do occur, but through natural remineralization, these changes are corrected quickly. Professional applications of fluoride may speed this remineralization process.
- 7. Is bleaching safe for immature teeth?** To my knowledge, there have been no reports to indicate that bleaching harms developing or newly developing teeth in the literature. However, since this has not been studied well, caution must be exercised when bleaching immature teeth.
- 8. Bleaching causes transient sensitivity.** Folks, this is a fact of life. Temporary tooth sensitivity is thought to be caused by several factors, including the transient increase of dissociated oxygen in the pulp of the tooth, and possibly the transient permeability of enamel and root structure, and the dessication that occurs by placing an anhydrous formulation on the teeth for long periods of time. Different techniques and different formulations of product can limit sensitivity. This is why it is important to offer more than one regimen of bleaching, and that doctors supervise/monitor bleaching progress. **8 8. "Sick" or preoperatively hypersensitive teeth are not good candidates for bleaching.** This is just common sense. If the patient complains of hypersensitive teeth, it stands to reason that bleaching may not be their favorite pastime. Explore and treat the hypersensitivity first, then consider bleaching. If the cause is idiopathic, possibly consider in-office protocols that minimize bleaching times.
- 9. Never promise a certain shade result to a patient.** Bleaching results are highly subjective. Studies have proven that accurate determination of bleaching success is highly variable. Establish reasonable expectations with every patient. What seems "white enough" to you or a staff member may not meet your patient's goals.
- 10. Periodic "Touching-Up" may be required.** The concept of recurring maintenance exists in nearly every other aspect of dental care, so why isn't it embraced with bleaching?