

# 5 Ways GLO Science Revolutionizes Tooth Whitening

As with all things innovative and paradigm-shifting, it began with these fabled two words: “What if?” Words that Dr. Jonathan B. Levine, an aesthetic dentist and visionary product inventor—he holds 23 patents with five pending in oral care—has been saying throughout his 30-year dental career. With a mission to revolutionize oral care and dental aesthetics, merging beauty with function and design, Dr. Levine asked, “What if we combined all of the positive factors of whitening, eliminated all of the compromises that caused sensitivity, and synergized a dual-whitening experience for our patients?”



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With the invention of GLO (Guided Light Optics) technology, Dr. Levine’s “what if” was answered. Working with his team of dental professionals, engineers, and product developers, he created the GLO Science Professional Teeth Whitening System, combining light and heat in a patented, closed-system mouthpiece. The GLO mouthpiece technology is used with specially formulated hydrogen peroxide whitening gel that is applied directly to the teeth using a dual-barrel syringe in the dental practice or a patented, hermetically sealed GLO Vial at home. This dual-whitening experience (in-office plus take-home) optimizes contact time without prolonged exposure, resulting in shorter treatment times, better results, and no pain. It eliminates the large, harmful lights that cause sensitivity, dehydration, and zingers as well as the messy trays that spread whitening gel all over soft tissue and bathe the roots of the teeth for hours at a time.

Reflecting on his optimized teeth-whitening innovation, Dr. Levine notes how perfectly it supports GLO Science’s mission — “to make more people smile... the power of the smile is its ability to transfer good feelings to someone else. GLO products and treatments represent innovation for everyone that makes it easy to have a healthy, beautiful smile,” he said.



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## GLO: A BREAKTHROUGH IN TECHNOLOGY AND DESIGN

When used with 24% or 30% hydrogen peroxide whitening gel syringes in the office or 10% GLO Vial whitening gels at home (Figure 1), the universally sized GLO Science Professional Teeth Whitening Mouthpiece (Figure 2) illuminates with a brilliant blue light as it gently warms to the optimal temperature for whitening. The heat accelerates the whitening gel against the tooth surface, trapping the whitening oxygens and resulting in faster, more efficient, and longer-lasting whitening. It is clinically tested and has been shown to whiten teeth up to 12 shades in 32 minutes in the office or over the course of five days when used at home—all without sensitivity. All of this, combined with an elegant, sleek design that make GLO fun and easy to use.

## #1: HOW GLO USES LIGHT AND HEAT

During other in-office whitening procedures, light and heat reside outside of the mouth, requiring exceedingly high temperatures and resulting in oxygen ions escaping off the surface of the tooth. GLO Science puts the light and optimal warming heat inside the mouth and uses the sealed environment created by the mouthpiece to maximize the efficacy of the whitening gel, preventing dehydration and sensitivity.

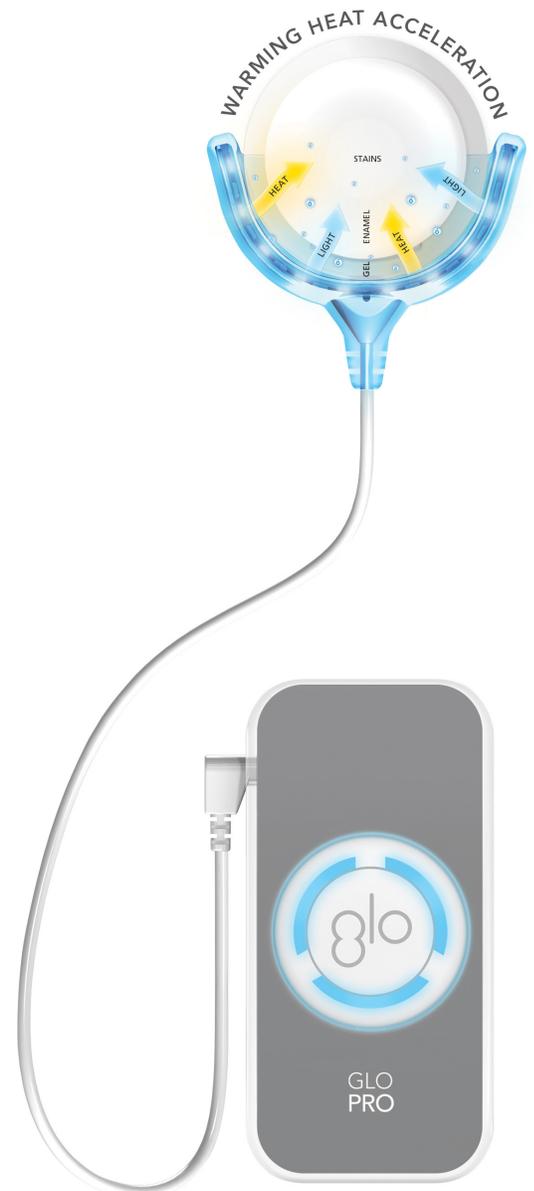
The controlled warming heat inside the mouthpiece accelerates the formation of highly reactive oxygen ions. This prevents the whitening oxygens from escaping into the atmosphere (Figure 3). Instead, they bombard the surface of the tooth, resulting in shorter but more effective wear times without painful, sensitivity-induced zingers. Because the warming heat is modulated to the optimal temperature, it prevents the pulpal response that happens with other professional whitening lights. The gentle heat is soothing, allowing patients to whiten in comfort.

## #2: HOW GLO USES H<sub>2</sub>O<sub>2</sub>

GLO Science Professional uses specially formulated hydrogen peroxide whitening gel, available in 30% and 24% concentration for use in office and 10% concentration for use at home. GLO never uses carbamide peroxide, and the gel therefore has no harmful breakdown byproducts (ammonia, urea, alcohol) that can cause irritation to the teeth and gums. In the dental practice, the whitening gel is delivered in a dual-barrel syringe that also includes a pH raiser and a special desensitizing agent. The lower 24% formulation is specially designed for younger patients and those with dentinal sensitivity, recession, and abfraction at the CEJ. At home, patients use innovative GLO Vial whitening gel, containing 10% purified hydrogen peroxide in an adhesive form (peroxydone). The Vials feature a unique brush tip applicator to allow for targeted, precise application as well as a highly adhesive gel formulation that stays put on the teeth, without migrating onto the soft tissue.

## #3: CONTACT TIME WITH GLO

Because of the shorter treatment time (four pre-timed 8-minute applications; half the time of other systems) and a temperature regulator that does not exceed 52°C on the tooth surface, teeth are not overheated nor excessively exposed to hydrogen peroxide.



#### #4: GLO'S INNOVATIVE METHODS

The heat and light in the GLO mouthpiece activate the whitening gel, accelerating the oxidation process. With its peripheral seal, the mouthpiece—built on a flexible circuit, making the fit universal—creates a closed environment for whitening, preventing the oxygen ions from escaping the tooth surface into the atmosphere, resulting in maximum efficiency and effectiveness in short exposure times. There is no need to take impressions or send the patient home with custom made trays.

It is understood that the longer a peroxide formulation remains on the teeth, the whiter the results. However, overexposure of peroxide can cause permanent changes to the teeth and sensitivity. People do not need to sleep in whitening trays or use a system for weeks on end. There is a faster and safer way, and as the experts, dental professionals must share the facts with their patients. Patients don't want to experience sensitivity by exposing their teeth to peroxide and high heat for too long.



#### #5: COLOR STABILITY AND MAINTENANCE WITH GLO

No whitening treatment can deliver permanent results, and shade changes must be maintained over time. The GLO Professional Take-Home Device allows patients to continue the whitening treatment at home to maintain the results they achieved in the office. While protocols can differ depending on factors unique to each patient, including starting shade and dietary habits, the rule of thumb is for them to use the contents of one GLO Vial each month for maintenance and complete a full or touch-up in-office or take-home treatment every six months. Patients can complete a full whitening treatment once or twice a year.

Of course, patients aren't always diligent when using take-home kits; therefore, it's important for hygiene schedulers to ask patients if they would like touch-up whitening during each routine hygiene appointment. A GLO whitening touch up can be completed in under 30 minutes in the office, and it is a terrific add-on to a hygiene appointment's regimen of services.



For information on GLO visit:  
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