



The universe at your fingertips.

## TwinLight<sup>®</sup> Endodontic Treatment

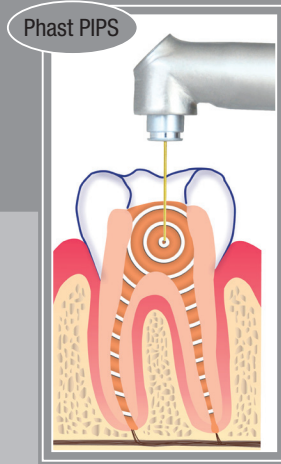
Looking for an effective endodontic treatment?

- Combined dual laser wavelength treatment
- High success rates with no need to repeat procedures
- Preserves more tooth endoskeleton
- No risk of ledging and demineralization
- Faster, safer and more effective
- Minimally invasive
- No physical strain associated with conventional root canal cleaning

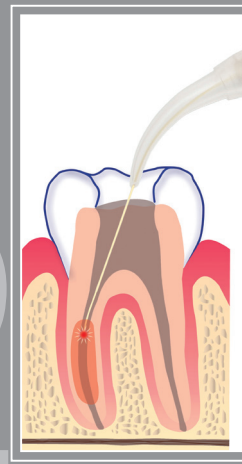
Available only with  
[www.lightwalkerlaser.com](http://www.lightwalkerlaser.com)



LightWalker<sup>®</sup>



In the first step, Er:YAG laser light cleans and debrides the canals and subcanals.



In the second step, the Nd:YAG laser deeply disinfects the dentinal walls.

## What is TwinLight® Endodontic Treatment?

TwinLight® is a revolutionary method for cleaning and disinfecting the root canal system using a combination of Er:YAG and Nd:YAG laser energy (available only with the LightWalker laser). With TwinLight®, practitioners are able to offer patients faster, safer and more effective root canal treatments.

## How Does TwinLight® Work?

TwinLight® successfully addresses two major disadvantages of classical chemo-mechanical treatments: the inability to clean and debride anatomically complex root canal systems and the inability to deeply disinfect dentinal walls.

The procedure is performed in two simple steps:

**Step 1:** The revolutionary photon-induced photoacoustic streaming method based on Fotona's Photo Activated Systems Technology or PHAST™, uses the power of the Er:YAG laser to create non-thermal photoacoustic streaming within the cleaning and debriding solutions introduced in the canal. The canals and subcanals are left clean and the dentinal tubules are free of a smear layer.

**Step 2:** The deeply penetrating Nd:YAG laser wavelength is utilized to decontaminate dentinal walls up to 1000 µm deep. In this step, the high peak-pulse power of the Nd:YAG laser plays an important role as it induces maximum disinfecting temperature pulsing for eliminating bacteria.

## Optimizing Dentistry's Two Best Laser Wavelengths

Utilizing both Er:YAG and Nd:YAG laser wavelengths in a treatment makes optimum use of the unique laser-tissue interaction characteristics of each wavelength. For example, Er:YAG induces shock waves in the cleaning solutions and Nd:YAG has a superior bactericidal effect. Combined, they can dramatically improve the outcome of laser-assisted endodontic treatments, guaranteeing maximum efficacy.

## Why is LightWalker Perfect for Endo?

In the TwinLight® approach, available only with LightWalker, the super-short 50 microsecond pulse duration, combined with the efficient design of the Er:YAG tip, allows for the lowest possible energy per pulse and repetition rate. This minimizes thermal effects and maximizes the propagation of the photon-induced photoacoustic shock waves in Step 1 of the TwinLight® approach.

The Nd:YAG VSP peak-pulse power allows three-times deeper disinfection of dentinal walls than other lasers. It effectively eliminates all types of bacteria.

Combining dentistry's two best wavelengths (Er:YAG and Nd:YAG) in one system also allows the practitioner to quickly and conveniently switch between Er:YAG and Nd:YAG while performing TwinLight®.

Additionally, LightWalker features the ultimate in convenience and ergonomics. Its easy-to-use touch screen offers a simple menu of pre-programmed endodontic treatments. You pick the treatment and the laser automatically sets your optimum starting parameters.

## Advantages of TwinLight® for You and Your Patients

An important advantage of laser endodontic treatment is that healing is much faster, so patient acceptance is very high. Overall treatment time is also shortened because the heat from the laser effectively cleans and disinfects the canals from bacteria, meaning fewer follow-up visits are required than with conventional treatments.

## Higher Success Rates

Clinical experience shows that TwinLight® is much more effective than traditional methods. Namely, there is deeper disinfection efficacy, more effective root canal cleaning, and a reduction of permeability and micro-leakage.

Dental lasers are the perfect tool for fast, easy-to-perform, and extremely effective treatment of root canal infections, and a patient-friendly alternative to conventional techniques.

## Getting Started with TwinLight®

The LightWalker training program is organized in cooperation with The Laser and Health Academy ([www.laserandhealth.com](http://www.laserandhealth.com)). During an intensive two-day workshop, participants cover basic laser physics and gain an in-depth understanding of laser-tissue interaction. Hands-on sessions under the guidance of laser dentistry experts help participants gain insight into the effects of Er:YAG and Nd:YAG laser light on different tissues. Presentations and discussions are led by Laser and Health Academy Lecturers and cover dental therapies, which include TwinLight®.

Practitioners can gain a deeper knowledge of Fotona's Phast PIPS, the photon-induced photoacoustic streaming procedure, by attending the LightWalker Advanced Endodontics Training Course. Contact Fotona to register.

To learn more about TwinLight® and what LightWalker can do for your practice contact Fotona at [info@lightwalkerlaser.com](mailto:info@lightwalkerlaser.com) today.