In NDI booth: See Fotona LightWalker laser with next-generation ‘ASP Pulse Control’

By Harvey S. Shiffman, DDS

The LightWalker’s “gold standard” laser wavelengths Nd:YAG and Er:YAG feature micro-processor current control, with next-generation photon amplification chambers that dramatically enhance performance and results. The new LightWalker procedure presets deliver the peak power, pulse shapes and pulse durations that can take your dentistry to a new level, for both you and your patients. Adaptive Structured Pulse (ASP) is a fundamental change at the core of laser technology, and Fotona’s 50 years of laser innovation makes this possible. By changing the engine that drives the laser, not only are new procedures possible, but traditional restorative procedures can truly be done more efficiently and with little need for anesthetic.

Having two lasers in one machine means there’s no compromise with procedure that use both lasers — and complex treatments become simple and easy to perform.

TwinLight periodontal treatment

With the LightWalker, Er:YAG and Nd:YAG wavelengths join forces for TwinLight™ periodontal treatment, which leverages the dramatic differences in selective absorption, specific target chromophores and tissue interaction of two very different lasers, all in one advanced system. TwinLight represents a breakthrough in laser assisted periodontal therapy, providing the ability to comprehensively treat the different facets of periodontal disease.

PIPS endodontics

PIFS is an advanced endodontic treatment with the LightWalker Er:YAG laser, which enables 3-D debridement of the entire canal system.

PIFS harnesses the power of the Fotona ASP:powered Er:YAG laser to create photocauterous shock waves within the cleaning and debriding solutions introduced in the canal. The containment of the shockwaves thoroughly streamlines these solutions through the entire canal system, enhancing their effectiveness. The canals and sub-canals are left clean, and the dentinal tubules are free of smear layer. PIPS is equally effective for final water rinsing prior to obturation.

Nightlase snoring therapy

Nightlase uses the photothermal capabilities of the LightWalker laser to convert and initiate formation of new, more elastic collagen. Target mucosal tissues are the oropharynx, soft palate and uvula. LightWalker’s proprietary “Smooth Mode” pulse characteristics create a non-ablative heat generation or “Heat Shock” that initiates the conversion of existing collagen to more elastic and organized forms and also initiates “neocollagenesis“ (creation of new collagen).

Nightlase tightens these tissues and has been shown in studies using cone beam imaging to increase the airways by as much as 30 percent in the most restricted part. The NIGHTLASE treatment is non-surgical and does not require any anaesthetic and can also be used as an adjunctive therapy for OSA patients.

Precise tissue surgery with simultaneous disinfection

The selective absorption of LightWalker’s Nd:YAG laser in soft tissue results in precise tissue vaporization with simultaneous coagulation. Additionally, up to 1,000× higher peak power compared to diode lasers and engineered pulse shapes provide superior disinfection.

Faster than diamond: Efficient cutting and patient comfort

The new LightWalker’s Er:YAG laser produces the speed you need for both hard and soft tissue. Now you can have patient comfort, better results and speed. The new generation of Fotona lasers can exceed the speed of conventional diamond drills. Fast and comfortable laser cavity preps can dramatically change your practice.

Faster and efficient for more procedures per appointment

LightWalker procedures are typically faster, easier to perform and more effective than traditional methods.

Laser treatments are by nature minimally invasive, and LightWalker takes this concept to a new level. This allows you the opportunity to raise your production and ROI by doing more procedures in the same amount of time or offering new procedures that may have been too complex or time consuming using traditional methods. It is a win-win for dentists, patients and staff members.

The LightWalker’s Er:YAG wavelength is 300 percent more highly absorbed in water than other Erbium wavelengths, increasing cutting speed. In addition, the ASP technology enables the Physics of OGP®. Studies and clinical experience have documented that the LightWalker ATE’s exclusive OGP mode improves ablation efficacy and precision. OGP’s fast, precise cutting and ability to cut oral tissues comfortably is a result of the “quantized” characteristic of the OGP mode pulse, which reduces the undesirable effects experienced with other hard tissue lasers.

Faster, less-invasive preps provide superior surfaces for optimal bonding with no smear layer

Laser dentists are excited to present these modern, minimally invasive and more natural treatment modalities to the dental community. Using the LightWalker laser, we can now have another tool in our dental toolbox and offer our patients health improvements that reach beyond restorative and rehabilitative dentistry.

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About the author

Harvey Shiffman, DDS, is in general practice at the Laser Dental Center in Boynton Beach, Fla. He is a graduate of Georgetown University School of Dentistry and completed a general practice residency at Georgetown University Medical Center, with an emphasis on treating medically compromised patients. Shiffman completed certification with the Academy of Laser Dentistry (ALD) in three laser systems and recently earned ALD fellowship. He uses and helps develop cutting-edge technology and has performed thousands of laser dental procedures.

Shiffman is an instructor for the Academy of Clinical Technology and recently lectured on advances in laser dentistry at the Yankee Dental Congress and the Greater New York Dental Meeting. He is an adjunct professor in the prosthodontics department of Nova Southeastern College of Dental Medicine and is responsible for the development of a dental laser educational program for undergrads and dental grad students.