



PRACTICE BUILDERS

How Can Class IV Lasers Fit Into Your Practice?



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Keywords Laser Therapy

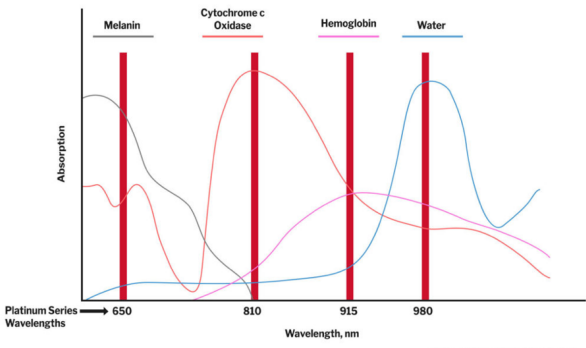
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Before implementing any new treatment modality to your practice, there are always two questions to ask:

- Why do I want to offer this treatment?
- What are the goals of this treatment?

Fortunately, the answers are simple and consistent over time. Ideally, you always want treatments that result in improved outcomes for patients and provide a good return on your investment for your practice.



Additionally, when evaluating treatment modalities for one's practice, clinicians should seek out modalities that are less invasive and have low levels of risk while still offering the potential for high reward. This is not only a best practice but patients are already looking for options that meet these criteria. How many patients do you know who love local steroid injections, taking systemic medications, spending hours in physical therapy, and, of course, having surgery? In my experience, class IV laser therapy not only provides an option that patients will typically accept, it also meets the key criteria of positive outcomes and generating a strong cash revenue stream for your practice.

However, not all lasers are created equal. In order to achieve all of the goals you have set with incorporating new treatment modalities into your practice, opting for a laser that is multi-functional (provides treatment for pain/inflammation, therapy, warts and fungus) is critical.

If you are considering class IV laser technology for your practice, there are some basic elements and terminology to keep in mind.

Assessing The Potential Benefits Of Class IV Laser Therapy

A laser is considered a class IV laser when it exceeds 500 mw.¹ Other considerations the physician should understand when accessing class IV lasers include power density and wavelength.

In regard to power density, which is the amount of energy in a specific area over time, dosage refers to the amount of energy per unit of tissue surface. Energy is measured in joules, the area in square centimeters, and thus the dosage is in joules per centimeter

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releases it to the biochemical processes occurring in the cell.

Wavelength in lasers is very important, along with peak and sustained power, which determines whether the proper dosage arrives at the target area that needs photochemical stimulation.

To effectively penetrate and treat target cells, therapy lasers should emit in the 800-1000 nm range. This range is referred to as therapeutic window for photobiomodulation. One should treat target tissue in which there is pathology within these wavelength parameters.³

With Class IV lasers, clinicians should have proper training on these devices as there are safety risks with their use. Some important risks to consider are vision injury due to unprotected direct exposure to the laser and skin burns due to improper application.

Can Class IV Laser Treatment Have An Impact For These Conditions?

Therapeutic lasers (also known as pain lasers) stimulate cell function. Surgical lasers collimate high amounts of energy into a beam, resulting in tissue cutting or ablation, there are single lasers that can do both.²

In my experience, I have also found class IV lasers beneficial in the treatment of inflammation, pain and arthritic joints, onychomycosis and mosaic warts. Clinicians may also employ these lasers to help facilitate wound care, fracture care and physical therapy applications.²

Plantar fasciitis and Achilles tendonitis. Laser therapy is an excellent alternative to local corticosteroid injections and/or non-steroidal anti-inflammatory drugs (NSAIDs) for plantar fasciitis and Achilles tendonitis. One must treat the inflammation along with any lack of range of motion such as ankle equinus. In my personal experience developing laser protocols for these conditions, I have found that lasers can increase the mobility of joints and their associated tendons and ligaments. My observation is that the use of the laser along the entire Achilles tendon and ankle joint can increase range of motion at the ankle joint.

The photochemical reactions that occur with laser therapy lead to reduction or elimination of pain, as well as the ability to heal inflammatory conditions like plantar fasciitis and Achilles tendonitis.²

Physical therapy or post-surgical rehabilitation. One may use laser therapy for acute conditions such as post-op or post-injury swelling, pain and lack of joint mobility. Class IV laser therapy may provide a more comfortable and economical alternative to physical therapy. Outcomes are often as positive as for physical therapy or better.³

Post-surgical incisions and wounds. Scar tissue may form due to excessive post-surgical inflammation. Employing a laser with proper settings/protocols may help reduce inflammation and subsequently lead to less scar formation.⁴

Neuroma. When neuromas occur secondary to inflammation in any intermetatarsal space, one may consider a class IV laser. Many times, there are other conditions such as capsulitis, bursitis and/or tendonitis associated with the neuroma. By learning how to treat these pathologies with a laser, in my experience, the clinician may address all of the associated compensatory problems versus solely focusing on one intermetatarsal space.

Neuropathy. In my experience, many clinics use class IV Lasers for patients who present with neuropathy. Lasers may provide adjunctive benefit as part of a comprehensive approach for these patients. In a 2015 study, Cg and colleagues demonstrated that therapy lasers can be very beneficial in the treatment of diabetic peripheral neuropathy.⁵



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FDA-cleared protocols is very important. The laser device should have the ability to not only cut out or ablate a wart, but also be able to treat mosaic warts without any use of a local anesthetic. Lasers do not only cut and coagulate. They can stimulate the immune system to treat plantar verrucae.⁶

Final Notes

Class IV lasers can be a huge game-changer for your patients and your practice. When assessing lasers or any medical device, I look for the following keys.

- Effectiveness.
- Affordability for patients.
- Ability of device to produce fast return on investment to my practice.
- Device can be promoted with an effective marketing and awareness plan.
- Device comes from a manufacturer with strong support and training capabilities.

Lasers can change your practice as long as you are willing to put in the time and effort to learn how to properly use the technology and incorporate it into your practice. Choose the right manufacturer is essential in making you confident and secure in the company’s ability to assist with team training and ongoing consultation/services. By taking all these factors into account, you can make high-powered, class IV laser therapy a thriving aspect of your practice.

Dr. Zuckerman is board-certified by the American Board of Ambulatory Foot Surgery with a "retired" designation. He discloses that he is the Chief Executive Officer of Zuckerman Future Technologies, a provider of class IV lasers for medical organizations.

1. Virginia Tech. Environmental Health and Safety. Laser Safety Classification. Available at: https://www.ehss.vt.edu/programs/LAS_classification.php . Accessed December 3, 2020.

2. Tunér J, Hode L. *The New Laser Therapy Handbook*. Roseville, Calif.: Prima Books; 2016: 29, 74-75, 153, 160, 293

3. Takenori A, Ikuhiro M, Shogo, U, et al. Immediate pain relief effect of low level laser therapy for sports injuries: Randomized, double-blind placebo clinical trial. *J Sci Med Sport*. 2016;19(12):980-983.

4. Kawalec J, Logan J, Hetherington V, Penfield V. Evaluation of the effect of one-weekly treatments with the Ceralas D Diode Laser on wound healing. Independence, Oh.: Ohio College of Podiatric Medicine Research Foundation; 2002.

5. Cg SK, Hande HM, Vidyasagar S, Rao K, Rajagopal KV. Efficacy of low level laser therapy on painful diabetic peripheral neuropathy. *Laser Ther*. 2015;24(3), 195-200.

6. Kneebone WJ. Immune-modulating effects of therapeutic laser. *Practical Pain Management*. 2010;10(9). Available at: <https://www.practicalpainmanagement.com/treatments/complementary/lasers/immune-modulating-effects-therapeutic-laser> . Updated March 7, 2011. Accessed November 20, 2020.

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