

# LASER THERAPY

## Light Amplification by Stimulated Emission of Radiation



**Laser** is the transmission of light photons at one wavelength in a coherent beam. At specific wavelengths in the infrared range, laser light goes deep into the body and is proven to help with pain relief and healing. Laser therapy has been utilized for decades as a safe and effective treatment for painful conditions, including arthritis and injuries. It accelerates healing because of its ability to modulate inflammation, improve vascular activity and stimulate cellular metabolism. Current research on its use for treating traumatic brain injury and healing from heart disease is promising. The infrared light from class-4 laser deeply illuminates body tissues, and its photons spark a cascade of biochemical reactions.

First, the energy output of the cells is accelerated: mitochondria ramp up production of adenosine triphosphate (ATP), the chemical energy that runs our body. Then, other biochemical and cellular processes kick in; studies have shown reduction of inflammatory molecules and the promotion of tissue growth factors. The amount of light energy and how far the light photons can penetrate the body depends on the power of the laser beam (wattage) and the specific wavelengths of the laser; high wattage infrared waves around 840 nanometers go deepest, up to about 4 centimeters.

Today's high power therapeutic lasers are easily 30,000 times the power of a common laser pointer, and at least 10 times the power of many low level therapeutic lasers. This wattage allows for "dosing" the body with a huge volume of light energy, capable of effectively treating larger areas of the body. The REMY SPORT laser is a 30 watt, dual wave, class IV laser that is ideal for use in sports medicine.

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# LASER THERAPY FAQs

## **Are there any side effects or risks?**

Research from around the world has shown that laser therapy is one of the safest treatment modalities available. Studies show no evidence of adverse reactions. Eyes are vulnerable, however, so protective glasses are always worn during the laser session to avoid any potential exposure.

## **What will high power laser therapy feel like?**

Unlike low power, “cold” lasers, high power lasers have a notably warm and soothing feeling. At full power they can get very hot when held in one place, which is why the therapist will keep the laser beam moving. In pulsed settings the beam can be held for several seconds over one point.

## **How long does each treatment take?**

The typical treatment using the REMY SPORT high power laser is 5 to 10 minutes depending on the size of the body area being treated and the dosage requirements. Covering and dosing the same areas with most low power lasers can take up to 2 hours!

## **How frequently will I need treatment?**

There is no proven formula for how frequently to treat with laser therapy, but the general consensus is that application 3 times per week is sufficient. Minor problems may only require a few treatment sessions within a few weeks, while chronic or difficult conditions respond better when treated more frequently and for a longer duration of time.

## **How many treatments will I need?**

Depending on the nature of the condition being treated, some new/acute conditions can feel better immediately and resolve after a few treatments. Difficult problems such as osteoarthritis, post-surgical joint pain, or neuropathy can require 10 to 20 sessions to improve. Some conditions will remain resolved or under control with periodic laser sessions.

## **How long before the results are felt?**

With high power laser therapy, some people feel immediate improvement after the very first treatment. Typically, lasting improvement often doesn't occur right away, and laser effects can be cumulative. The consensus is that patients should obtain about 6 sessions before assessing the results.