

Red Light Laser Acupuncture:

Most lasers used in acupuncture are known as low-level lasers or "cold lasers," (because they don't produce heat.). These are not the same as lasers used for laser surgery, in which "hot lasers" are used as a scalpel to burn or cut. Studies show that low-level lasers can help regenerate cells, decrease pain, reduce inflammation, improve circulation, and stimulate hair growth, to name a few examples.

In 1991, a study was done in Novosibirsk, Russia that applied directly to the study of acupuncture. Researchers shined light on various parts of the body and found that light travelled under the skin to other acupuncture points, but it didn't travel to places that were not on acupuncture meridians. It appears that the body contains a sort of fibre optic network—where light enters an acupuncture point, travels through the meridian and can be detected at other places along the meridian with a sensitive photon detector. This is a fascinating study showing how light is actually received, used and transmitted throughout the body.

Recent studies on laser acupuncture have included advanced brain imaging, as well as several other modern protocols for measuring various physiological effects to the body. These studies show that laser acupuncture has physiological effects, not only locally, but also in the brain, similar to needle acupuncture. Laser on Urinary Bladder 67, for example, shows measurable effects in the brain. The effects were only detected when the laser was turned on. When the laser was turned off, no effects were detected.

Multiple published studies have shown good effects of laser acupuncture for the following conditions: hiccups, bed wetting, weight loss, post-operative nausea and vomiting, pain control, surgical anaesthesia, dental anaesthesia, carpal tunnel syndrome, dry eyes, and stroke-related paralysis. Obviously, as more studies are performed, more information will be found.

Advantages to Using Lasers

Perhaps the greatest advantage of laser acupuncture is that it's completely painless. This is a great way to attract patients to your clinic who may have needle phobia.

Most patients feel nothing at all during laser acupuncture. Occasionally I hear of patients who feel something, but it isn't something they can describe really well. I believe they are feeling an energetic shift in their body. Some even describe an energetic sensation propagating along the meridian being treated.

You've already done the hard part by diagnosing and deciding which points to use. With laser treatment you simply light up the point for a number of seconds, depending upon the power and output of your laser, and then move on to the next point. It's fast and easy. We're talking seconds in comparison to needle retention time, which may be 20 to 30 minutes.

Because you are not breaking the skin—there is zero risk of infection. A couple of summers ago I volunteered my services at a summer camp for kids with cancer. The organization had concerns about the legal issues involved in treating kids with needles, so instead I used lasers and experienced great results.

Laser acupuncture is also effective and often shown to be as effective as needle acupuncture for a variety of problems. Effectiveness is enhanced because laser acupuncture allows you to treat points you otherwise might not be able to treat, due to patient age, sensitivity, or fear.

A number of practitioners are actually training patients to self-treat during the interim between visits by sending them home with a diagram of recommended points and instructing/helping them to obtain a proper laser. This is especially effective for chronic-pain patients. Keeping movement in the channel between treatments helps chronic-pain patients to heal faster.

How to Perform Laser Acupuncture

The hardest part is deciding the correct points to treat and knowing the correct type of laser to use (which we will discuss further below). Any point on the body can be treated with laser except for those near the eyes. Even if your patient has a wound or an injury, you can shine laser light onto that area without contraindication.

Depending on the power and type of laser you are using, generally you are going to treat for approximately 15-60 seconds per point. Most practitioners report having good treatment effects in 10-15 seconds, depending on the type of laser used. Points that require deeper needling, like the legs and torso, may need longer treatment times. Ears, hands and feet require less treatment time.

Safety Considerations

Some lasers require the use of safety glasses. A lot of lasers used in acupuncture don't need glasses because they are Class IIIa lasers. These are considered eye safe because the blink reflex is fast enough to prevent any damage to the retina. Higher-powered lasers (Class IIIb) require safety glasses for both the practitioner and the patient.

Regardless of the type of laser you use, it should never be used around the eyes. Also, even with a Class IIIa laser, you should never stare directly at the beam or even the dot on the skin. In fact, if the skin is intact, it is a good idea to have the tip of the laser actually touching the skin to minimize light scatter or light reflection—which decreases the possibility of a reflective beam causing damage to the eye.

Because lasers have been shown to stimulate cell growth and repair, it's not a good idea to treat where you don't want cell growth. You obviously wouldn't want to laser someone's skin cancer, for example.

The Right Equipment

Lasers can range in price from under \$100 to over \$10,000. It's important to understand the equipment you are using so you get the best results.

What really matters is the output. It's the light that the laser produces that decides the outcome. Are you using the laser only to treat acupuncture points? Are you planning to treat broad areas or conditions (joints, inflammation, pain, etc.)? Each of these scenarios would require different laser capabilities.

I'm going to focus specifically on activating acupuncture points to move *qi* and blood in the channels. Here are some terms to be aware of:

- **Wavelength:** This refers to the color of the laser and is measured in nanometers (nm). At the high end of the color spectrum, we find violet and ultraviolet in the 400 nm range. At the low end of the spectrum, we find infrared light at 700 nm and above. Common acupuncture wavelengths are red, in the 635-650 nm range. Other colors you may find available are blue, ultraviolet and green. Different wavelengths have different applications.

- **Output:** This refers to the power or brightness of the beam, measured in milliwatts (mW). Most commonly you will find 5 mW lasers for acupuncture—which are classified as IIIa according to the FDA. Though these lasers have a lower-power output, they work well for acupuncture.

Some laser manufacturers endorse a higher-power approach, while others endorse lower power. I think of the alternatives in terms of communication. Both shouting and whispering are effective forms of communication. The high-powered (Class IIIb) infrared lasers penetrate deeply and deposit lots of energy into the tissue. This is the shouting approach. The 5 mW laser is more like whispering, but because you are dealing with the power of the meridian system, all it needs is a little push, or a whisper, to do what needs to be done. In this instance you are working with the energy system of the body to help get the job done, so it doesn't take a sledgehammer to do it. Given then inherent safety of Class IIIa, I prefer the low-power approach.

Wavelength Comparisons

635 nM (Red) -The most common.

- The same wavelength produced inside the cells of the body, so it is biologically compatible with the body.
- Stimulatory effect: increases ATP production in the cell.
- TONIFYING effect on an acupuncture point.