



Laser Acupuncture, Part II: Let There Be Light!

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The sun and its origins are the source of light and *qi*. All living things require light just as they need air, food and water. In this second article in the series, we will explore why laser acupuncture is able to influence biological processes. What you are about to read validates the energetic model of Oriental medicine. The science is complementary and has the potential to add new dimension to our practice of medicine. There is light within our cells!

Biophotons

Every living cell transmits and receives energy across the electromagnetic spectrum from radio waves through infrared, visible and ultraviolet wavelengths. **Biophotons** provide the means for near instantaneous communication throughout our bodies, and create an intricate web of energy within all living systems.

In 1923, Russian biologist Alexander Gurwitsch first detected this non-thermal, electromagnetic energy. He called it "mitogenetic radiation" to describe its effect of stimulating growth. Laboratories throughout Europe and the U.S. confirmed his discovery. By the early 1970s, biophysicist Fritz-Albert Popp and others had developed extremely sensitive equipment which made it possible to quantify this energy. Popp advanced a revolutionary theory of startling simplicity and power. According to his calculations, *whatever controls our biological processes must operate at the speed of light*. Anything less would be far too slow to account for the pace of cell-to-cell communication necessary to sustain life. Popp showed how an organism, depending upon biochemical or molecular means of control, must inevitably fail to regulate metabolism and growth. He proposed that ***biophotons activate and direct most, if not all, physiological processes.***

The significance of this theory is enormous, and should not be lost on those of us who practice Oriental medicine. Scientists in more than a dozen countries have felt strongly enough about the importance of Popp's work to form an international network of research laboratories to investigate biophotons. Popp and his colleagues in laboratories in a dozen countries continue to study biophotons and the human energy field, and they have made some startling discoveries.

Biophotons are coherent, monochromatic, directional and highly organized in the same fashion as the beam from a laser. Should we be surprised that acupuncture with a visible, red or infrared laser at low intensities can enhance metabolism, accelerate healing and relieve pain?

In a famous lecture in 1961 entitled "Predictability: Does the Flap of a Butterfly's Wings in Brazil Set off a Tornado in Texas?", Conrad Lorenz proposed that a nearly infinitesimal stimulus in just the right place has powerful effects. He termed it the "butterfly effect." Western medicine calls it "biological induction."

Influencing One Cell --> Many Cells --> System

Laser therapy's systemic effect is significant and well documented. Braverman et al.¹ found that when only one of two wounds on opposite sides was treated with laser light, the untreated wound healed more rapidly than controls. Rochkind et al.² treated only the right side with bilateral wounds including burns and observed that healing was accelerated on both sides compared with controls. Airaksinen et al.³ found that unilateral treatment of patients with chronic shoulder pain caused improvement on both sides though greatest effect was on the treated side.

Laser acupuncture applied to areas of local obstruction can dramatically restore the circulation of *qi* and blood and alleviate pain, often almost instantaneously. English researcher Mary Dyson believes that the rapid reduction in inflammation observed during and after laser therapy is the biggest factor in pain relief. Western medicine has documented many other reasons for analgesia, including elevated levels of endorphins, nerve blockade, and the restoration of blood flow to areas of ischemia and stagnation. Laser acupuncture has a regulatory effect, restoring *qi* and function to weakened cells and tissues without affecting healthy tissue negatively. At the cellular level, ATP production is enhanced; cellular respiration and metabolism increase; mitochondrial activity is stimulated; singlet oxygen production increases; and DNA, RNA and protein synthesis are all accelerated. At the tissue level, infrared and visible red laser light increase circulation; enhance the formation of new blood and lymphatic vessels; reduce edema; increase the formation of granulation tissue in wounds and accelerate re-epithelialization at their margins; increase the activity and numbers of fibroblasts; increase collagen formation; and increase the number and activity of macrophages.

Laser acupuncture is safe. An adverse reaction has never been reported. It's perfect safety record and many of its effects are directly related to wavelength. As one moves down the electromagnetic spectrum, wavelength becomes longer and the energy carried by light becomes less. The photon energy at visible, red and infrared wavelengths is gentle enough to be accepted without damaging cells and tissues.

1. Braverman B, et al. Effect of helium-neon and infrared laser irradiation on wound healing in rabbits. *Lasers Surg Med* 1989;9:50.
2. Rochkind S, et al. Systemic effects of low-power laser irradiation on the peripheral and central nervous system, cutaneous wounds and burns. *Lasers Surg Med* 1989;26:12.
3. Airaksinen O, et al. Effects of HeNe-laser irradiation on the trigger points of patients with chronic muscle tension in the neck. *Scand J of Acup & Electrotherapy* 1989;4:63-65.