

# Painless Laser Acupuncture for Smoking Cessation

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## ABSTRACT

**Objective:** Traditional Chinese Medicine (TCM) in healthcare is based on the holistic concept of smooth energy flow. The energy helps maintain the circulation of Blood and bodily processes. An efficient supply of consistent energy and good circulation helps support the body's homeostasis. In therapeutics, low-level laser energy can be transferred to the body (via the auricle) to activate or maintain homeostasis through specifically appropriate auricular sites. The goal of this research was to track the effects of painless laser acupuncture (PLA) on a group of highly motivated patients who wanted to quit smoking.

**Materials and Methods:** Executives in their early 30s–50s, who were highly motivated and stressed individuals were treated. Most of these 175 patients smoked 1 pack of cigarettes per day (20 cigarettes), with a few patients smoking more than 1 pack per day. The treatment consisted of PLA applied to both auricular and body acupuncture points in a total of 7 sessions.

**Results:** There was general satisfaction among the patients about the treatment. Of 24 females (13.72%), 21 (87.50%) did not smoke after completing the 7 sessions. Two women reported that despite not having real cravings to smoke, they smoked 1–2 cigarettes per day. One woman (4.12%) reported that she smoked 2–3 cigarettes.

**Conclusions:** The PLA technique for smoking cessation, combined with the principles of TCM, not only helps smokers stop smoking but also restores their homeostasis and good health. By selecting the optimal auricular and body acupuncture points and meridian channels and applying laser energy dosages, the homeostatic hence healing process can be synergized.

**Keywords:** distress, dependency, craving, anxiety, health restoration

## INTRODUCTION

THE USE OF NEEDLE ACUPUNCTURE to treat drug addiction and opium smokers goes back to the 1970s. However, the use of cutting-edge laser technology—low-level laser therapy (LLLT)—is a new field in Traditional Chinese Medicine (TCM). The special laser characteristics of power, wavelength, resonance, and quantifiable dosages coupled with laser's unique monochromatic and coherence properties have made it the potent "Light Energy Medicine" for restoring health.<sup>1</sup> Laser's efficacy could be greatly enhanced when the quantifiable energy dosage is transferred to the patient through the acupoints through the ear and the main meridian pathways (hence optimizing the patient's Qi). With

respect to smoking cessation, the success rate might be greater if smokers wish to change their lifestyle without having to worry about cravings or any "cold-turkey" effects.

The World Health Organization (WHO) has accepted acupuncture since the late 1970s as a modality in medicine for treating pain and for disease prevention.<sup>2</sup> Today, research into modalities of acupuncture has moved beyond needle acupuncture to LLLT applications. One organization conducting such research is the Medical University of Graz in Austria. Led by Gerhard Litscher, MSc, PhD, MDsc, his team integrates high-technology acupuncture and laser acupuncture research, in collaboration with centers worldwide, in such countries as the United States, China, Russia, and Korea.<sup>3</sup>

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This current study initially involved 180 patients who were tired of smoking and sought treatment at the Laser Acupuncture Centre, in Singapore since 2013. The patients' ages ranged from 30 to 50. After 5 patients dropped out, the remaining 175 subjects included 154 males (85.55%) and 26 females (14.44%), with most of the patients in middle- and higher-management positions. The patients understood the hazards of smoking and wanted to develop a healthier lifestyle. There were a few dropouts, due to their work commitments and travel schedules. Although most of these smokers had wanted to quit earlier, the thoughts of cravings, withdrawals, and needle phobia were deterrents to cessation. What is more, alternative therapies, such as acupuncture, auriculotherapy, and painless laser acupuncture (PLA), are still not well-publicized, compared to pharmacotherapy, such as nicotine patches and chewing gum therapy. This PLA holistic approach uses more acupuncture points to achieve better outcomes, hence delivering higher efficacy. For these patients, PLA eliminated the fear of needles, enabling better compliance, and, therefore, yielding better results.

**MATERIALS AND METHODS**

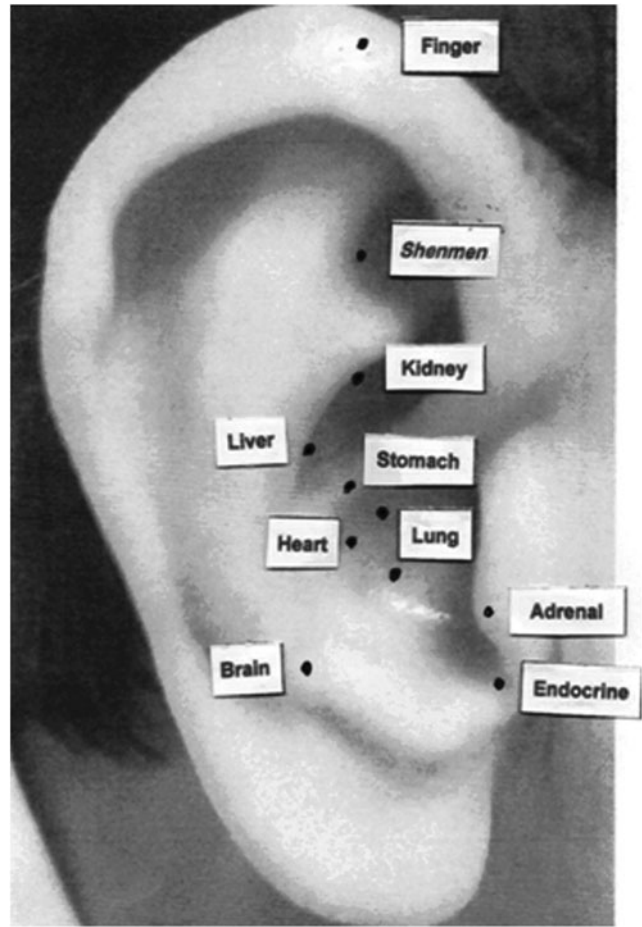
**The Technique**

For the PLA technique, a combination of auricular and body points was selected for treatment consecutively as shown by Figure 1 and Tables 1 and 2. The RJ Physiolaser™ system<sup>4</sup> (Physiolaser Olympic, Mediline Biolase Technology, Singapore), with two probes, was used to provide 1 course of treatment, which consisted of 7 sessions over a period of 3 weeks. The first week was the most critical period, with 3 treatments dispensed consecutively for 3 days and 1 session before the end of the first week. The second week consisted of 2 sessions, and the last session on the third week. The auricular points used are shown in Figure 1.

Probe "A" had a visible wavelength of 638 nm/150 mW with a duty-cycle of 85%. This probe was used to treat the superficial auricular points, with each point receiving a dosage of 3.5 Joules/cm<sup>2</sup>. The total energy applied to the 10 auricular points was 38.2 Joules/cm<sup>2</sup> for 5 minutes, with an energy loss of ~3.2 Joules/cm<sup>2</sup>, resulting in 35.0 Joules/cm<sup>2</sup> being received, due to time lost when moving the probe from one acupuncture point to another acupuncture point. If the client was right-handed, the left ear was treated and vice versa.

Similarly, the body points used are shown in Table 1. Probe "B," which had a wavelength of 810 nm/300 mW with a duty-cycle of 80% was used. Each point was treated with a dosage of 7.5 Joules/cm<sup>2</sup>. The total energy applied to the 18 points was 144 Joules/cm<sup>2</sup> for 10 minutes, with an energy loss of ~9 Joules/cm<sup>2</sup>, resulting in 135 Joules/cm<sup>2</sup> being received, due to time lag when shifting between acupuncture points (Table 2).

The combined total energy dosages delivered for treatment per session was 170 Joules/cm<sup>2</sup>.



**FIG. 1.** For auricular points, Probe A was used for 5 minutes at 3.5 Joules/point. The ear points were as follows: Shenmen, Heart, Lung, Endocrine, Brain, Stomach, Kidney, Adrenal, Liver, and Finger.

**The Patients**

The 175 clients who stayed in the study were executives in their early 30s–50s, who were highly motivated and who were stressed due to the nature of their jobs. Most smoked 1 pack of cigarettes per day (20 cigarettes), with a few patients smoking more than 1 pack per day.

**RESULTS**

In general, the patients did not feel physically different after the first session, but when they smoked their first cigarette post therapy, they reported that that they no longer

TABLE 1. BODY POINTS THAT PROBE B WAS USED FOR 10 MINUTES AT 7.5 JOULES/POINT

HT	LU	KI	SP	LR	LI	Ren <sup>a</sup>	Du <sup>b</sup>	ST	PC
3 & 7	5 & 6	3 & 10	6 & 9	3 & 8	4 & 11	CV 23	GV 20	37 & 40	3 & 6

<sup>a</sup>Ren/Conception Vessel=CV.

<sup>b</sup>Du/Governing Vessel=GV.

TABLE 2. OVERALL FEEDBACK AND RESPONSES AFTER COMPLETING 4TH TREATMENT

<i>Taste of cigarette</i>	<i>Craving</i>	<i>Body status</i>	<i>Sleep</i>	<i>Food</i>	<i>Body odor</i>	<i>Stress</i>	<i>Mental state</i>	<i>Well-being</i>
Tasteless	No urge	Full energy	Deep	Tastes good	No odor	Relaxed	Alert	Good

enjoyed its taste as much as before. By the second session, the patients’ craving for nicotine had reduced and they smoked less. After the third session, most patients reported that they no longer finished each cigarette smoked, as the taste was “awful.” After completing the fourth session, patients who had a genuine desire to quit smoking did not smoke at all. A few patients did continue smoking one cigarette per day out of habit but did not enjoy smoking as much as before. More than 80% provided feedback that they no longer had the urge to smoke. The feedback and their responses are shown in Figure 2 and Table 2.

Initially, there were 180 patients (154 males, 85.55%; and 26 females, 14.45). Three men (1.95%) and 2 women (7.69%) dropped out after 2 sessions, due to work commitments and traveling. This left 175 patients (151 males, 86.28%; and 24 females, 13.72%).

Of these 175 patients, 128 males (84.77%) did not smoke after completing the 7 sessions. Twenty-three males (15.23%), 19 (82.61%) still smoked 1–2 cigarettes due to habit and because they were afraid of total withdrawal illness affecting them psychologically. Four males (17.39%) smoked more than 3 cigarettes per day, due to family and work stress, but these men were satisfied and their spouses were happy as the men smoked far less than before and noticed that their health improved. They felt that they could stop smoking if they were really very determined, compared to without treatment, when they smoked 20 cigarettes or more per day.

Of 24 females (13.72%), 21 (87.50%) did not smoke after completing the 7 sessions. Two women reported that al-

though they had no real cravings to smoke, they smoked 1–2 cigarettes per day due to habit. One woman (4.12%) reported that she smoked 2–3 cigarettes, due to stress regarding some family issues and children’s academic problems that led her to smoke. Overall, she was happy as she was also able to control her drinking habit of wine better.

Although there was no long-term follow-up, as these patients were all private clients, no more than 9 males (7.03%) and 3 females (12.5%) came back for an additional maintenance treatment after 3 months. There were no outright failures, as the majority of the patients did not smoke anymore and several patients had cut down tremendously—in their own minds, the treatment was a success. As we know, smoking is a personal choice and habit and each patient had to make a decision to attempt cessation. The majority of the patients in this study decided to seek treatment, due to various health issues.

Laser acupuncture certainly had a big role to play. First, the treatment was painless and all of the smokers were able to undergo it without experiencing needle phobia. Second, the acupoints of the meridian channels are gateways to the Organs; thus, the vital organs (such as the Lungs, Heart, Liver, and Kidney) benefited from the treatment and all functions were improved and rejuvenated. Conventional therapy uses pharmacotherapy—such as a nicotine patch or chewing gum that usually target cravings and withdrawals—could have created long-term side-effects in these patients. Finally, the success rates after 7 sessions of PLA Smoking Cessation were 151 males (84.77%) and 24 women (87.50%)

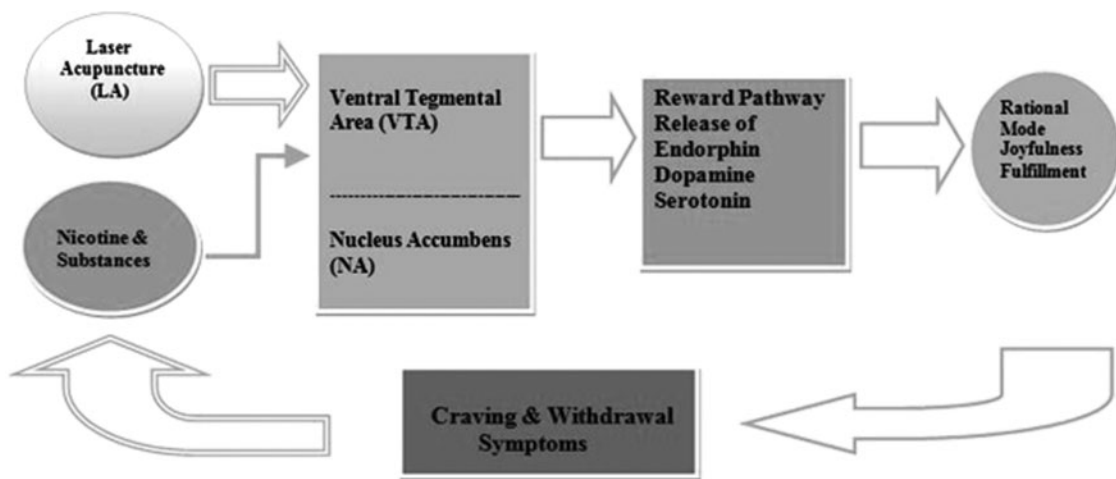


FIG. 2. Reward pathway of laser acupuncture.

## DISCUSSION

Needle and LLLT acupuncture modulates psycho–neuro–endocrine-immunologic (PNEI) communications between the brain and body. These pathways involve the brain’s limbic system or emotional reward or “feel good” center. The limbic system is involved in the placebo effect. However, the effects of needle and laser acupuncture have been shown to be greater than the effects of placebo.<sup>5–9</sup> By introducing PLA to the smokers, LLLT helps to maintain the efficiency of these PNEI communications and their associated neurotransmitters, during the smoking-reduction phase of treatment, with the depletion of these neurotransmitters. In particular, treatment can be fast tracked, with auricular points that access the higher- and mid-brain centers (including the limbic system) through the auricular branches of Cranial Nerves 5 and 10 (also known as the trigeminal and vagus nerves, respectively)<sup>10,11</sup> and the superior cervical plexus, which has a direct link to restfulness and sleep management at the supraoptic chiasma.<sup>12,13</sup> With this support of stable brain and body interactions, withdrawal effects from nicotine cessation is minimized.

It was noted that some smokers with smoking histories of more than 15 years could not finish three puffs of a cigarette after 3 sessions of therapy. The feedback from the smokers was that the treatment was effective, as it overcame their dependency on nicotine. Their cravings had been reduced tremendously or no longer existed (Table 2). More clinical studies investigating this auricular laser modality could benefit public health greatly by reducing smoking-related health risks and disorders. It is the Prime Minister of Singapore, Lee Hsien Loong’s vision to make “Singapore a Smoke Free Nation.”

## CONCLUSIONS

The PLA approach, when integrated with the TCM principles of acupuncture, increases treatment efficacy for smoking cessation and for restoring smokers’ health. The treatment was comfortable and painless, and the protocol regimen enabled easy compliance. Being pain free and easy to apply, PLA is an ideal protocol to be recommended to smokers for combating their addiction.

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## AUTHOR DISCLOSURE STATEMENT

No competing financial interests exist.

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