

## Select Scientific Research Articles Relating Acupuncture to Podiatry, Pain Management and Rehabilitation

**ARTICLE: Acupuncture Treatment for Plantar Fasciitis: A Randomized Controlled Trial with Six Months Follow-up.** Zhang SP, Yip TP, Li QS. Evid Based Complement Alternat Med. 2009 Nov 23.

Plantar fasciitis is a common cause of heel pain. It has been suggested that some acupoints have a specific effect on heel pain. The aim of this study was to determine the efficacy and specificity of acupuncture treatment for plantar fasciitis. Subjects were randomly assigned to the treatment group (n = 28) or control group (n = 25). The treatment group received needling at the acupoint PC 7, which is purported to have a specific effect for heel pain. The control group received needling at the acupoint Hegu (LI 4), which has analgesic properties. Treatment was administered five times a week for 2 weeks, with an identical method of manual needling applied to the two acupoints. The primary outcome measure was morning pain on a 100-point visual analog scale (VAS) at one month post-treatment. Secondary outcome measures included a VAS for activity pain, overall pain rating as well as pressure pain threshold using algometry.

**Significant differences in reduction in pain scores, favoring the treatment group,** were seen at one month for morning pain (22.6 +/- 4.0 versus 12.0 +/- 3.0, mean +/- SEM), overall pain (20.3 +/- 3.7 versus 9.5 +/- 3.6) and pressure pain threshold (145.5 +/- 32.9 versus -15.5 +/- 39.4). No serious adverse event was observed in either group.

*The results indicate that acupuncture can provide pain relief to patient with plantar fasciitis, and that PC 7 is a relatively specific acupoint for heel pain.*

**ARTICLE: TREATMENT OF HALLUX VALGUS (BUNIONS WITH ACUPUNCTURE) Symptomatic improvement and anatomical regression of arthritic hallux valgus deformity (bunion) treated by acupuncture.** Am J Acupuncture. 1992;20:9-12, Sternfeld M, Finkelstein Y, Eliraz A, Barzilai N

Seven female patients presented with severe pain and walking difficulty due to bilateral hallux valgus; 6 had inflamed and infected skin. The condition was present for 3 to 16 years and all were scheduled for surgery. SP 4 and 5 were needled with 3 painful points above, lateral and medial to the bunion where insertion went into periosteum of the bunion. This is painful, so needles were not manipulated but left in for 30 minutes. Seven to 16 weekly sessions were used. After a few sessions, result was excellent to moderate in 4 patients. *Three years following treatment, results were excellent to good in 5, and moderate in 2 patients. Surgery was cancelled for all.*

### ARTICLE: THE TREATMENT OF RHEUMATOID ARTHRITIS WITH ACUPUNCTURE

Michael L. Buffington, M.D.

**ABSTRACT**—This case report describes a 33 year-old white male with rheumatoid arthritis (RA), who was satisfactorily treated using a Tai Yin triangular equilibration according to the technique of Mussat. Moreover, a classic “arthritis” acupuncture treatment of RA may result in exacerbation of symptoms, rather than remission.

This patient is a 33 year old white male who was first seen in the clinic in October, 1988, complaining of diffuse joint pains with swelling of the hands and pain in the knees, elbows, wrists, and ankles. RA factor was positive 1:320. ANA titer was negative. Historical evaluation revealed that the patient had a positive tropism for sweets. There was also a family history of diabetes mellitus. The patient's morphology was that of a tendency towards obesity. His tongue was slightly pale and swollen, compatible with the morphology of a "spleen tongue" (1). Patient's hand morphology, according to Requena's system (2), was that of an "earth hand". The patient was started on a series of acupuncture treatments consisting of a triangular equilibration of Tai Yin. The points used were LU7, LI4, ST36, BL11, BL23, and BL60, with a triple heater needle at CV12. Needles were inserted and left in place for 20 minutes without stimulation.

**RESULTS:** *Over the course of five to six treatments, all joints involved responded equally to treatment, manifested as a 90% decrease in pain and stiffness. At the present time, the patient is stabilized with monthly treatments. Patient's sedimentation rate was normal at the start of therapy, and has remained so throughout.*

**ARTICLE: Treatment Of Reflex Sympathetic Dystrophy In 3 Pediatric Patients Using 7 External Dragons And Devils Acupuncture** Anna Kelly, MD

**ABSTRACT**

**Background** Reflex sympathetic dystrophy (RSD) or complex regional pain syndrome (CRPS-I) is a syndrome of sustained, diffuse, burning pain following an initiating noxious event. The syndrome is believed to be both instigated and maintained by the sympathetic nervous system. Conventional medical treatment is aimed at interrupting sympathetic nervous system activity with medication, nerve blocks, or sympathectomy.

**Objective** To determine if 7 External Dragons and Devils Acupuncture can relieve pain associated with RSD in the pediatric patient.

**Design, Setting, and Patients** A case series of 3 pediatric patients with RSD and lower extremity pain treated in a private practice in Atlanta, Georgia, from May 2000 to February 2003.

**Intervention** Treatment with 7 External Dragons and Devils Acupuncture.

**Main Outcome Measure** *Reported reduction in pain.*

**Results** *After acupuncture treatment, pain was completely resolved in 2 out of 3 patients. In the 3<sup>rd</sup> patient, pain was significantly reduced by 80% after acupuncture.*

**ARTICLE: Neural Acupuncture: A Rationale For The Use Of Lidocaine Infiltration At Acupuncture Points In The Treatment Of Myofascial Pain Syndromes** Mark K. Frobb, MD

**ABSTRACT**

A major part of an acupuncture physician's practice relates to the treatment of pain syndromes, especially myofascial pain syndromes. These are a poorly defined group of pain syndromes generally relating to the supporting musculature of the axial skeletal system. Many different modalities are used to treat these pain syndromes. All of them produce some level of success, but few consistently resolve all these difficult and disabling pain syndromes. Much of the treatment to date has been based on the inflammatory model; therefore, physical therapies have been used to resolve the suspected inflammatory process. This article approaches myofascial pain syndromes from a neuropathic model standpoint, discussing the etiology and histology of the

neurogenic lesion. *Acupuncture sites ideally represent an anatomical guide to peripheral nerve anatomy, permitting lidocaine infiltration at the point of the suspected neurogenic lesion.*

### **ARTICLE: An Innovative Technique For Relief Of Knee Pain**

J Altern Complement Med. 2007 Jun;13(5):539-46. Ronald S. Shapiro, MD

#### **ABSTRACT**

Knee pain affects a significant portion of the population. Knee pain likely will become an even greater clinical challenge with obesity on the rise. Symptomatic and functional relief using conventional medical therapies may be limited due to their ineffectiveness and side effects. Acupuncture treatment offers a safe and effective method to control knee pain. An alternative, needleless acupuncture technique is described herein that may produce greater relief than traditional acupuncture. The advantage of this technique is that treatment time is shortened, fewer office visits are required, and results appear equal or superior to results of other pain-relieving modalities.

*“This trial, which builds upon our previous NCCAM-funded research, establishes that acupuncture is an effective complement to conventional arthritis treatment and can be successfully employed as part of a multidisciplinary approach to treating the symptoms of osteoarthritis,” said Dr. Berman.*

### **ARTICLE: Bilateral effect of unilateral electroacupuncture on muscle strength.**

Huang LP, Zhou S, Lu Z, Tian Q, Li X, Cao LJ, Yu JH, Wang H. Department of Health and Exercise Science, Tianjin University of Sport, Tianjin, China.

**OBJECTIVES:** This study aimed to examine the bilateral effect of 4 weeks of unilateral electroacupuncture on leg muscle strength. **DESIGN:** The effect of unilateral electroacupuncture at two selected acupoints, Zusanli (ST-36) and Xiajuxu (ST-39), which are located on the anterior tibialis muscle, on dorsiflexion strength was evaluated by statistical analyses of the interactions between the muscle strength pre and post 4 weeks of intervention, between the two legs, and between an experimental and a control group.

**SETTINGS/LOCATION:** The trial was carried out in the exercise rehabilitation laboratory at Tianjin University of Sport. **SUBJECTS:** Thirty (30) healthy men with an average age of 20.9 +/- 2.98 (SD) years were randomly allocated into an electroacupuncture group (EG) and a control group (CG). They were physically active, but without specific strength training or previous experience of acupuncture. **INTERVENTIONS:** Participants in the EG were given 3 sessions of electroacupuncture per week. In each session, the electroacupuncture was applied to the right leg at the acupoints with 8 duty cycles of 1 minute on and 1 minute off, pulse width of 1 millisecond, frequency of 40 Hz, and intensity of 30-40 V. Participants in the CG group kept their normal daily activities without additional intervention. **OUTCOME MEASURES:** The maximum strength in dorsiflexion of each leg was examined by having participants lift weights in the range of motion of approximately 20 degrees at the ankle joint. **RESULTS: Repeated-measures analysis of variance with Bonferroni adjustment detected significant increase in strength of both legs (right 21.3%, left 15.2%) in the EG ( $p < 0.05$ ) and the increase was significantly higher than that of the CG ( $p < 0.05$ ).**

The CG showed no significant change (right 3.0%, left 4.8%), post-treatment. **CONCLUSIONS:** Unilateral electroacupuncture at the selected acupoints improved muscle strength of both limbs. These findings may have implications in physical therapy and rehabilitation settings.

**ARTICLE: Ischemic Foot Treated With Acupuncture** P. G. Parameswaran, MD

**Abstract**

Vascular insufficiency of the lower extremity with resulting ischemic pain and possible gangrene is common in elderly persons due to atherosclerosis, diabetes mellitus, or secondary to cardiac arrhythmias causing embolization of peripheral vessels. Vasospastic disorders such as acrocyanosis, livedo reticularis, and Raynaud's syndrome are aggravated by exposure to cold, and are more common in younger patients. This report concerns a 79-year-old woman, with none of these predisposing causes, who presented with several painful ischemic toes on the left foot with impending gangrene.

**CONCLUSION**

This patient had severe persistent pain and ischemia of 3 toes of the left foot for more than a week. The pain of ischemia and the discoloration of the toes were severe enough to warrant consideration of possible amputation for relief of pain. Gangrene was imminent.

*The results of acupuncture treatment of the ischemic foot was positive and saved the patient's foot from amputation. Acupuncture may be a useful adjunctive therapy in the management of vascular insufficiency.*

**ARTICLE A clinical study of wrist-ankle acupuncture for 30 cases of diabetic peripheral neuritis.**

The Journal of Chinese Medicine, October 1, 2006, Hequn, Jiang

Diabetic neuropathy is a common complication of diabetes and one of the main causative factors in diabetic disablement. It involves pathological change mainly to the peripheral vascular system with disturbance of the nerve cells, but can also affect the cranial and spinal nerves. Symptoms begin as the slow onset of sensory disturbance in the peripheral nerves of the limbs and progress to numbness, pressure and severe pain, with eventual involvement of the motor nerves. They also tend to worsen with rest and at night. In this study, 90 patients with type II diabetes and peripheral neuropathy were divided randomly into three groups of 30, receiving wrist-ankle acupuncture, body.

*Positive results were demonstrated utilizing acupuncture.*

**Other articles you can read:**

1. Chen BX, Zhao YL. Treatment of painful heel with combined method of traditional Chinese medicine and Western medicine. Clinical analysis of 900 cases. *Chin Med J* Jul 1985;98(7):471-4.
2. Erickson RJ, Edwards B. Medically unresponsive foot pain treated successfully with acupuncture. *Acupuncture in Medicine* November 1996.
3. Birch S, Hammerschlag R. *Acupuncture Efficacy: A Compendium of Controlled Clinical Studies*. Tarrytown, NY: National Academy of Acupuncture and Oriental Medicine, August 1996.
4. Steinmetz M. Treatment choices for plantar fasciitis. *Am Fam Physician* Dec 1999;60(9):250-54.

*Studies have shown acupuncture to be effective in relieving certain types of foot pain. A study published in the journal Acupuncture in Medicine in 1996 found acupuncture to be effective*

*in relieving otherwise unresponsive chronic foot pain. A 1999 study, meanwhile, found that electrical stimulation of acupoints on the feet could increase blood flow to the foot and lower leg. There have also been anecdotal reports of individual acupuncturists using different techniques to relieve pain associated with the ankle, heel, and ball of the foot.*