

Neurofunctional Acupuncture

The success of an integrated model



Neurofunctional treatment on an Olympic champion, Athens 2004.

Dr. Elorriaga's medical background includes more than 13 years of research and practice in the areas of exercise physiology and neurofunctional acupuncture, as well as 25 years of sports medicine consulting with professional athletes and private clients. He is the founding director of the McMaster University Contemporary Medical Acupuncture Program (1998) and the creator of a practical integrated neurofunctional diagnostic and treatment system for musculoskeletal problems and sports injuries using electroacupuncture and manual techniques. For more information, please contact Valerie Cannon at 905-521-2100 ext. 75175, contemporaryacupuncture@mcmaster.ca, or through www.contemporaryacupuncture.com

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During the last decade, acupuncture has become the most popular of the complementary medicine modalities worldwide, despite the attacks of detractors who maintain that it is “scientifically unclear” whether acupuncture is better than a placebo for the treatment of pain. In Canada, several academic institutions have been offering training programs in acupuncture for licensed health professionals for many years. All but one of these programs combine, in different proportions, ideas from Traditional Chinese Medicine with various degrees of scientific information.

McMaster University is one institution that offers instruction and practical training in medical acupuncture. The university's original acupuncture program first began offering the training to health-care professions in 1998. Since then, the program has developed an innovative standardized curriculum that is entirely based on contemporary neurophysiology. This unique neurofunctional acupuncture model has provided graduates of the program with techniques that stem from scientifically verifiable information and evidence, thus lending them enhanced credibility in the health-care market while providing patients with effective treatment options.

By the end of 2010, more than 1,300 health professionals, including more than 600 chiropractors, completed the exclusive accelerated training in what has become known as Contemporary Medical Acupuncture (CMA) offered by the original McMaster program. Also, more than 500 health professionals have participated to date in the more than 35 advanced courses offered through the program. The unique competitive edge provided by the training, and its integrated approach, has translated into greater professional success for all graduates while increasing the utility and benefits of acupuncture for thousands of patients. Specifically, an elite group of chiropractic graduates, who combine neurofunctional electroacupuncture with soft-tissue and manipulation techniques in their practices, have achieved unprecedented success in the area of treating sports injuries. From consulting with professional teams to serving in Olympic games and different World Championships, these young chiropractors have established their integrated



Palmaris longus motor point.

approach as the gold standard of care for sports-related injuries. Many other professionals trained by the program have also established themselves as the preferred providers of care for musculoskeletal problems in their respective geographic areas.

WHAT IS NEUROFUNCTIONAL ELECTROACUPUNCTURE?

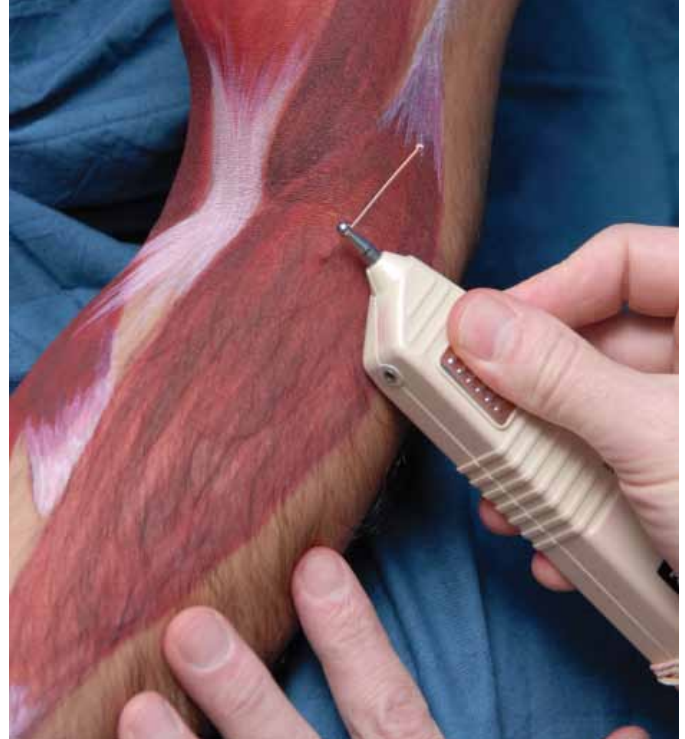
Neurofunctional electroacupuncture treatments are easy to replicate using a neurofunctional diagnostic approach. A neurofunctional diagnostic approach does not seek a single hypothetical source of pain; instead, it investigates, clinically, the most common levels of dysfunction associated with a given pain problem, namely neurological, biomechanical, muscular, metabolic, and psychoemotional levels. Clinical examination aims to determine, among other things, which muscles are neurologically inhibited and which are weak due to atrophy; which tissues have lost normal texture; which kinetic chains are not working properly; and which peripheral nerves have developed mechanosensitivity. Understanding all these aspects allows the practitioner to design a truly individualized integrated neurofunctional treatment plan.

Specifically, neurofunctional acupuncture interventions aim to facilitate modulation of neurological activity at every level identified as having been disturbed, such as autonomic sympathetic and parasympathetic, motor and sensory somatic, and central (autonomic centres, somatic areas, limbic system, cerebellum, etc.).

Following these functional subdivisions, neurofunctional acupuncture treatments are then designed using a modular approach, with local inputs, axial and trunk inputs, and systemic regulatory inputs. Functional clinical outcome measures able to reflect changes on these levels are used afterwards to evaluate effectiveness.

An important point is that neurofunctional acupuncture interventions do not aim at eliminating pain directly. The goal is to promote self-regulation of nervous system activity, facilitating up- and down-regulation processes such as the production and repair of myelin sheaths, the synthesis of protein-based nerve membrane ion channels, and the secretion and metabolism of neuropeptides, which will result in the clinical improvement sought by the patient.

During the last 40 years, hundreds of basic science studies in laboratories, using both human and animal models, have shown



Brachioradialis motor point activation.

the effects of acupuncture on many neurological, cellular and metabolic processes involved in the levels described above. To date, however, no scientific neurofunctional acupuncture approach has been systematically tested, other than empirically, in everyday clinical practice. This testing is now being carried out by the faculty and more than 1,800 graduates of the McMaster University Contemporary Medical Acupuncture Program. Results are impressive, reproducible and promising.

BEYOND THE UNIVERSITY SETTING

Functional medicine is quickly becoming the new paradigm to address disturbances of the body that are complex and multidimensional in nature. The role of neurofunctional acupuncture in this ongoing revolution is rapidly growing. For instance, in 2008, 2009, and 2010 the U.S. navy hired the author and CMA program director, and a team of his instructors, to train an elite group of navy medical doctors in neurofunctional acupuncture. A customized, 300-hour, continuing medical education (CME) accredited program, based on the McMaster CMA Program, was created. As a result, today, neurofunctional acupuncture is being integrated into the daily care of marines, sailors, and other navy personnel in war zones, ships and aircraft carriers, and in U.S.-based medical facilities. The main applications of neurofunctional acupuncture in the military are in the management of pain, musculoskeletal problems and stress-related disorders, and to date, these are proving to be powerful and practical proofs of the value provided by the model.

In Canada, expanding the application of the neurofunctional acupuncture system into various clinical situations seems warranted and can best be done by the very capable hands of all the progressive health-care professionals, among them chiropractors, who continue to seek new, scientific and evidence-based ways to better help patients every day.

And this is really what offering a scientifically based approach is all about – providing practitioners with practical and credible tools they can integrate into their practices in order to yield beneficial and reproducible results. •