



Acupuncture and the osteopathic family physician

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Summary Acupuncture has an ancient and interesting history and is also enjoying a recent surge in interest, investigations, developments, refinements, and research. Acupuncture is practiced around the world in a number of styles by a wide variety of health care practitioners for probably all known illnesses and injuries. Acupuncture is being rediscovered in America and flourishing with a momentum matched by the enthusiasm of both practitioners and patients alike. Medical acupuncture is a holistic method of diagnosis and treatment by physicians. Acupuncture is both old and new. It has been found in various forms in various cultures for thousands of years, and new and exciting discoveries about its mechanisms of action and ability to treat most illnesses and injuries surface every day. Professional and popular books, journals and research papers in every language promote and explain this exciting phenomenon.

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Introduction

Medical acupuncture is a holistic method of diagnosis and treatment by physicians. Acupuncture is both old and new and has been found in various forms in different cultures for thousands of years, and new and exciting discoveries about its mechanisms of action and ability to treat most illnesses and injuries surface every day. It has an ancient and interesting history and is also enjoying a recent surge in interest, investigations, developments, refinements, and research. Practiced around the world in a number of styles by a wide variety of health care practitioners, quite possibly for probably all known illnesses and injuries, acupuncture is being rediscovered in America and flourishing with a momentum matched by the enthusiasm of practitioners and patients alike. Professional and popular books, journals and research papers in every language promote and explain this exciting phenomenon.

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History

Acupuncture's long history began thousands of years ago when ancient peoples around the world began using sharp objects to treat their ailments. Stone needles were invented in China around 4000 B.C., and variations of acupuncture using simple sharp objects were practiced by such diverse groups and cultures as South African Bantu tribes, Arabs in North Africa and Arabia, North American Eskimos (Inuit), and South American natives.¹ Ayurvedic physicians in India used a form of acupuncture for thousands of years.

The most important written records of acupuncture in China began with the *Yellow Emperor's Classic of Internal Diseases* (circa 500-200 B.C.), with hundreds of Chinese textbooks on the subject following over the centuries. Chinese acupuncture concepts spread all over Asia, including in Japan, Korea, and Southeast Asian countries, where they blended with and were shaped by the local populations.¹ Ancient Egyptian papyrus scrolls from 1550 B.C. discuss lines of energy throughout the body, which are now referred to as *meridians*.

Since the 16th century, acupuncture and acupuncture texts were translated and brought to Europe, especially

France and Germany, where acupuncture is taught today in many modern medical schools as part of the curriculum for physicians in training. Acupuncture continues to be refined and modified with each culture, even in modern Europe. The French especially have provided some of the most important research and advances in ear acupuncture, called auriculotherapy or auricular medicine, where the entire body can be diagnosed and treated through the ear, using either tiny needles or electrical stimulation.¹

Acupuncture came to America from Europe with the early colonists. Dr. Franklin Bache, Benjamin Franklin's great grandson, wrote the first medical acupuncture article in the United States in 1825, entitled "Memoirs on Acupuncture," and he translated French acupuncture textbooks into English. A medical and surgical text written in 1863 by Dr. Edward Warren discussed the use of acupuncture and acupressure, and acupuncture was even used during the US Civil War. Sir William Osler, in his 1892 medical textbook *Principles and Practice of Medicine*, recommended acupuncture for the treatment of many conditions, especially back pain and sciatica. He wrote, "For lumbago, acupuncture is, in acute cases, the most efficient treatment."¹

Science and research

Acupuncture research has blossomed and expanded exponentially in the last 50 years, mostly in China, Japan, Europe, America, and Canada. Tens of thousands of research articles and books have been printed in dozens of languages. Almost all known diseases, every organ system in the body, and psychiatric conditions are affected by acupuncture and have all been researched using acupuncture. Many acupuncture systems with their multiple effects help describe a working model of a multisystem information network, all contributing to the explanations of the various aspects of acupuncture. The latest scientific equipment, including scans and microscopy have been used to examine and explain everything from the acupuncture points themselves to ultimately the treatment effects as well.¹

For instance, acupuncture points as seen under the microscope are found to be vertical columns with the tissue, nerves, lymph nodes, and blood vessels, concentrated and organized in a distinctive fashion. Acupuncture points have a lowered electrical resistance, allowing for increased electrical conductance along fascial planes in the body. Technetium 99, a radioactive tracer, when injected into acupuncture points, diffuses in myofascial trajectories, which correspond topographically to classically described acupuncture pathways, or meridians, giving substantial and modern proof of these ancient phenomena.¹

Fascia is electron-rich crystal lattice, allowing electron transfer and bioelectric fields to be transduced throughout the body, making an ideal semiconductive matrix and communicating network that conveys biochemical and bioelectric information throughout the body, from a microscopic

to a macroscopic level, throughout the fascial planes/meridians. The bioelectrical properties of acupuncture points in particular and fascia in general help provide a reasonable explanation for the meridians or acupuncture energy pathways.¹

Several studies have been done and correlations have been made between acupuncture points and trigger points (71%), tender points (virtually 100% because any acupuncture point can be tender during a disease process; these are called *ah shi* or "ouch" points in Chinese), strain-counterstrain points (80%), and Chapman's points (60%).²⁻⁴ One article suggests that trigger points (and possibly acupuncture points) are evoked by abnormal depolarization of motor end plates.⁵ Trigger points have always responded to multiple treatment techniques, including dry needling (acupuncture) and osteopathic manipulative treatment (OMT).⁶⁻⁸

Needling or stimulating acupuncture points electrically and biochemically signals the nervous system to release neurotransmitters and hormones throughout the body, in the internal organs, muscles, spinal cord, and brain. Our body's own chemical messengers then can react within us by positively influencing our own internal, homeostatic, regulating, and natural healing systems, diminishing pain, improving function, and enhancing energy, physical, and emotional well-being.¹

Acupuncture signals modulate major neurotransmitters and have been extensively documented at various levels: serotonin, norepinephrine, substance P, gamma aminobutyric acid, dopamine, adrenocorticotrophic hormone, beta-endorphin, methionine-enkephalin, leucine-enkephalin, dynorphins, histamine, bradykinin, prostaglandins PGE2 and PGF2 alpha, angiotensin, vasoactive intestinal peptide, and cholecystokinin.¹

Acupuncture points are named and numbered and each has a long description. They can be needled or stimulated with your fingers (acupressure), either alone or in combinations and sequences with other points. It is probably safe to assume that most acupuncture points and treatments were first discovered serendipitously, through trial and error. We can imagine the first primitive people accidentally poking themselves with something sharp, being surprised by the positive or negative outcome, and then repeating it or not, with various combinations thereafter. There are more than 300 traditional points on the meridians, with several hundred more not on the meridians. The points were originally only named, with the numbering system now used being a recent innovation. New acupuncture points and their effects are being discovered every year, and old and new ones are finding new combinations to treat old as well as modern diseases.¹

Most ancient systems have named the effects of acupuncture by describing them basically as an "energy phenomenon". Every language or tradition has devised names for the energy, the most frequently used being "chi" or "qi" (Chinese) or "ki" (Japanese). More modern practitioners have used the term "bioenergy," which makes the term easier to use when integrating it into modern medical usages.¹

There are several circuits of meridians or meridian systems in the body, some paired left and right (mirror images of each other), some unpaired, and some as combinations of the others. A meridian may be thought of as a bioenergetic pathway through fascial planes, and thus develops from the embryo. All the meridians form a number of bioenergetic circuits and subcircuits.¹

A number of hypotheses have arisen over time to provide and explain some aspect of acupuncture's many mechanisms of action, and a few are provided here. Each of these explanations provides a piece to the larger puzzle of acupuncture's multisystem model and invites further investigation.¹

Medical acupuncture

Medical acupuncture is done by physicians and dentists who are trained in acupuncture as well as in conventional medical, osteopathic, or dental school curricula, in all specialties, and who can successfully integrate all their training and modalities to diagnose and treat patients. Medical acupuncture training through the Helms Institute, sponsored by the University of California-Los Angeles, offers a 300-hour course for physicians only and reflects broad training in Chinese, Japanese, Korean, American, and European acupuncture philosophies and styles, resulting in a truly polyparadigmatic approach to diagnosis and treatment (<http://hmieducation.com/>). For more information on medical acupuncture, visit the website <http://www.medicalacupuncture.org>.

Treatment

Acupuncture treatments may be integrated with osteopathic manipulative treatment (OMT) and/or medicine. Treatment times, frequencies, and even number of needles vary among practitioners. Usually patients may be seen once a week to begin with, depending on their conditions, and as they improve, the treatments and frequency will change accordingly.

The variety and combinations of acupuncture points, meridians and needling techniques are virtually endless. There are a number of major and minor acupuncture styles, philosophies, and techniques evolving throughout the world. And combined with other healing modalities, especially OMT, the possibilities for treatment and effectiveness are that much greater.

Acupuncture needles have evolved over time. They started as merely sharp objects of varying efficacy, and are now small (usually less than a half millimeter) stainless steel shafts with handles of metal or plastic. They are sterilized, designed for single use only, and mass-produced mostly in China, Japan, and South Korea with a retail sale price of about \$.05 to \$.10 apiece, and then sold through a

number of acupuncture supply businesses throughout the world.

In 1996, the FDA reclassified acupuncture needles as medical devices, and the National Institutes of Health is now spending millions of dollars on acupuncture research.^{9,10} Some health insurances now cover acupuncture. The World Health Organization recognizes and encourages the use of acupuncture for a variety of conditions, as do mainstream medical organizations like the American Osteopathic Association, which states: "Whereas, Osteopathic Medicine is not limited in the use of any beneficial therapeutic or diagnostic modality; now, therefore, be it resolved, that the American Osteopathic Association recognizes that acupuncture may be a part of the armamentarium of qualified and licensed physicians."¹¹

A computer-based literature search through large, online sources such as the National Library of Medicine, Medline, Ovid, PubMed, and DO-Online reveals thousands of papers and books in English and other languages on acupuncture, and separately as well for OMT, for a wide spectrum of conditions. There are 22 known examples of combining the two (OMT and acupuncture).^{3,4,12-31} Four recent and relevant references from peer-reviewed medical journals relate acupuncture to low back pain, demonstrating positive results in three controlled studies for acupuncture and low back pain, and the myofascial system's possible relation to acupuncture meridians.³²⁻³⁵

Medical acupuncture may be used to treat patients with most conditions:

- Common general health problems, illnesses, or injuries
- Pains of most types—acute or chronic
- Neuromusculoskeletal conditions

Conclusion

A brief overview of acupuncture, including some of its latest scientific research and theories, has been discussed. OMT and acupuncture share a great deal in their holistic, inclusive philosophies, as well as their many and similar mechanisms of action. Central to both systems are the themes of the all-pervading fascia and its many biomechanical, biochemical, and bioelectrical properties, which is also related to the importance of palpatory diagnosis and treatment.

OMT and acupuncture can be used to treat patients with a number of illnesses and injuries. The two modalities can be used separately or combined together for effective results. Combining OMT and acupuncture is rewarding for the patient and the physician. The combination may provide a contemporary, integrative, interdisciplinary approach to an ever-broadening scope of complete patient care.

Osteopathic physicians are encouraged to explore, investigate, and integrate the old and new world of acupuncture and discover its many natural benefits.

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