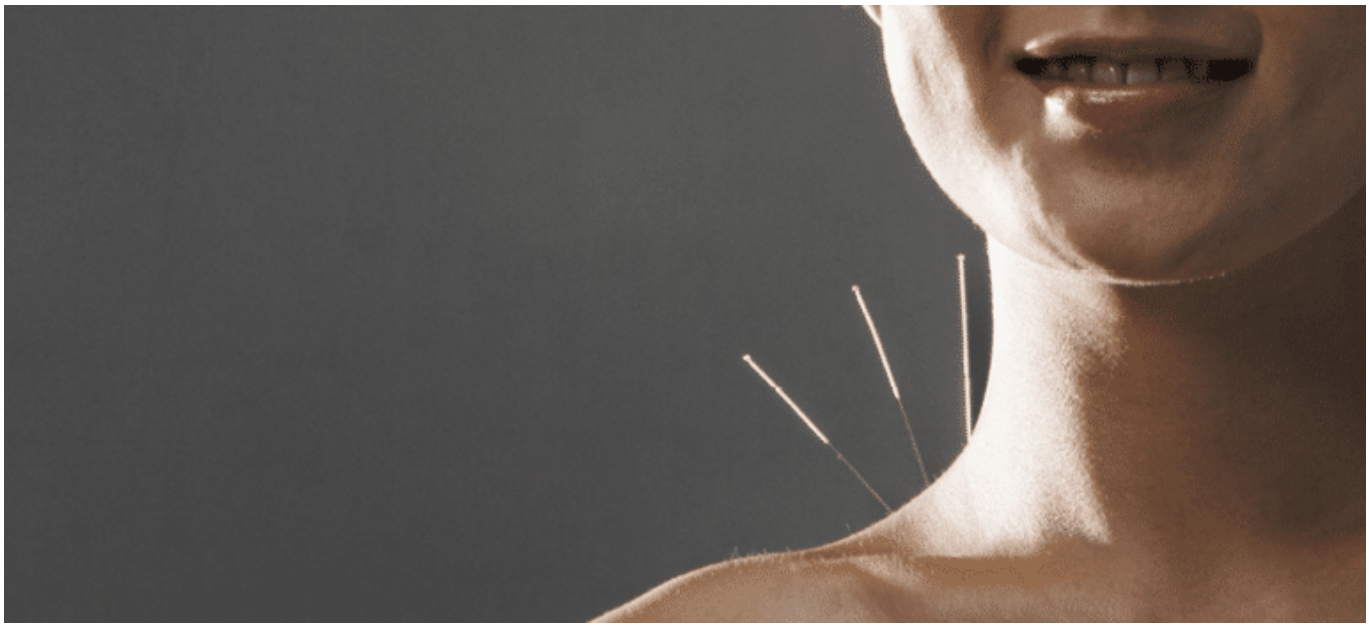
On point



Acupuncture may improve chronic pain and other symptoms of multiple sclerosis when performed by a practitioner experienced in neurological diseases.

by Donna Shryer

In 1992, on her 30th birthday, Lisa Ashworth had her first migraine. It certainly wasn't how she planned to celebrate the day, although migraines—and the excruciating pain they can bring—are not uncommon for people with multiple sclerosis. And Ashworth, a resident of Fort Meyers, Florida, had been diagnosed four years earlier with relapsing-remitting MS.

During the next decade of living with MS, Ashworth tried pharmaceutical solutions to treat or reduce her migraine symptoms, but nothing worked. Eventually, in 2002, she turned to acupuncture. Weekly treatments gradually decreased the migraines' severity and occurrence. By the end of 2003, her headaches were less devastating and their frequency was down from three a week to once or twice a year.

In 2009, at the age of 47, Ashworth's diagnosis had advanced to secondary-progressive MS, which introduced additional MS-associated symptoms, including depression, anxiety, numbness, fatigue, dizziness and severe eye pain. "I still see my acupuncturist at least once a week," says Ashworth, now 51. "These new symptoms are always with me—so the results don't equal our migraine management—but I do think that acupuncture takes their severity from a 10 to a 4."

Needlework

Acupuncture, an integral part of traditional Chinese medicine (TCM), has been practiced for about 3,000 years. It involves penetrating the skin with hair-thin, solid metallic needles that are manipulated by hand. Needles generally remain in place for 10 to 12 minutes.

Needles are placed at specific points that lie along meridians, or channels, in the body, and in TCM, each meridian is thought to represent a line of energy to a particular body organ. In a healthy person, vital energy, called **chi** (sometimes spelled **qi**) in TCM, flows smoothly through all channels; in someone who is sick or in pain, energy flows are blocked or unbalanced. TCM practitioners believe that acupuncture stimulates a meridian point and its correlating organ to open the flow and balance the chi throughout the body, and ultimately improve health.

"People experience acupuncture differently, but most feel no or minimal pain as the needles are inserted. Some people feel energized by the treatment, while others feel relaxed," according to a background paper published by the National Center for Complementary and Alternative Medicine (NCCAM), the federal government's lead agency for scientific research on complementary and alternative medicine. Moreover, NCCAM states that few complications have been reported from the use of acupuncture when performed by a qualified practitioner.

Piercing the surface

A few very small studies and anecdotal cases have considered acupuncture's effect on people with MS, although "there are serious limitations to all of these studies," stresses Dr. Allen C. Bowling, physician associate at the Colorado Neurological Institute, clinical professor of neurology at the University of Colorado and author of **Optimal Health with Multiple Sclerosis: A Guide to Integrating Lifestyle, Alternative, and Conventional Medicine** (Demos Health, 2014).

For example, in a small double-blind Brazilian study, 31 people with relapsing-remitting MS who were taking disease-modifying medication received either placebo or true electro-acupuncture (a form of acupuncture that sends very low-volt electrical impulses through the needles to gently intensify the effect). Over a six-month period, those who received true acupuncture reported improved quality of life, with a reduction in pain and depression. This is according to the report, authored by Juan G Quispe-Cabanillas, and published in 2012 in **BMC Complementary and Alternative Medicine**. While encouraging, the study was simply too small to adequately interpret its results.

"This study did not include enough participants to reach statistical significance, but the results were promising," says Dr. John C. Reed, assistant professor at the Center for Integrative Medicine at the University of Maryland School of Medicine. "The study's most significant finding to me was that patients who received the full six months of electro-acupuncture treatments, as opposed to the control group that received placebo acupuncture, continued to improve throughout the six-month study, although there was no follow-up after the study ended, so we're not sure if the results lasted."

Other respected studies have demonstrated a clear association between acupuncture and pain management in the general population. In 2012, a team of researchers conducted a meta-analysis (which combines results of multiple studies) of data from nearly 18,000 individuals in 29 randomized controlled trials. The report, published in the Archives of Internal Medicine, concluded that acupuncture is more effective for chronic pain than either placebo acupuncture or no treatment for people seeking relief from a range of pain-causing conditions such as osteoarthritis, migraines and chronic back, neck and shoulder pain.

In another considerably smaller study, researchers in Germany used functional magnetic resonance imaging (fMRI) to capture images of the brain while 18 healthy people experienced a mild pain stimulus, first with and then without acupuncture. Results of the study, presented in 2010 at the annual meeting of the Radiological Society of North America, suggested that acupuncture may reduce activation in several brain areas involved in the perception and processing of pain; it may affect incoming pain signals to the brain; and it may spark an analgesic (pain-relieving) response in the brain.

Looking for Answers

There's no definitive understanding or conclusive evidence yet of how acupuncture works. The traditional Chinese medicine explanation is that needles inserted at acupuncture points (for example, shown at knee in the video below) can restore the balance and flow of an energy or life force called **chi**.

One of several modern neurological theories suggests that acupuncture signals (shown in blue in the video below) suppress the pain signals (red) at certain points in the nervous system, such as the spinal cord and thalamus (shown in boxes at lower and center right in the video below). Then, in the brainstem (box at top right in the video below), the acupuncture signal triggers the release of endorphins,natural painkillers that resemble opiates and mimic the effects of morphine.

Click the icon in the bottom right of the video to expand to full screen.

Graphic by Claus Lunau / Bonnier Publications / Science Source

In theory

Western medicine, however, needs more evidence before it is prepared to endorse or reject acupuncture as a treatment specifically for MS symptoms such as pain, depression or fatigue, says Henry McCann, DAOM (doctor of acupuncture and oriental medicine), and director of the Institute for Classical Asian Medicine in Madison, New Jersey. "I've seen many persons with MS, and some do remarkably well with acupuncture and with others it's like we aren't doing a thing. We haven't figured out the magic equation to anticipate who will and will not respond to acupuncture."

That “magic equation,” Dr. Bowling emphasizes, involves identifying the exact mechanisms of action. In other words, how does acupuncture work, chi theories notwithstanding?

“There are a lot of hypotheses, but none have been rigorously studied to date,” Dr. Bowling notes. For example, he says, acupuncture may increase levels of opiates produced by the body that bind to opiate receptors in the brain, mimicking the analgesic effects of morphine. Another hypothesis suggests that acupuncture may play into the body’s creation of serotonin, a neurotransmitter that is often regarded as the chemical responsible for maintaining mood balance.

Dr. Reed offers another theory: “When you stimulate the acupuncture points, you stimulate nerve endings around those points, which send signals to the spinal cord and the brain,” he says. “This signals the brain to connect in new ways.”

Acupuncturists have also floated other concepts of connectivity, according to Dr. McCann: “There is some interesting research being done as to how acupuncture influences connective tissue just under the skin and above the musculature, although the exact mechanisms of acupuncture remain undefined.” One idea was that the connective tissues correlated with the acupuncture channels.

Unfortunately, the most seminal exploration of this theory, an article published in 2010 in the **Journal of Chinese Medicine**, titled “The Connective Tissue Hypothesis for Acupuncture Mechanisms,” examined 10 years of studies pertaining to this idea but found that the studies did not provide definitive evidence supporting it.

“No valid studies exist to prove—or disprove—these hypotheses,” Dr. Bowling stresses. “But I will say that traditional acupuncture is very low risk and may have benefits for multiple MS symptoms. That’s the best we can say right now.”

Decision points

Given the limited evidence available, seeking acupuncture to treat MS symptoms remains a personal choice, and individuals considering acupuncture should discuss with their healthcare team how it fits into their overall plan of care.

For 48-year old Sean Mahoney, diagnosed with primary-progressive MS in 2012, and currently living in Santa Ana, California, acupuncture has remained a personal choice since his diagnosis. It’s a tool he chooses to use to manage his sciatica that likely resulted from his slightly irregular gait, which is a common MS-related symptom.

“There isn’t much we can do for primary-progressive MS right now, so I’m left to my own devices,” Mahoney says. “I turned to weekly acupuncture appointments, with my doctors’ approval, and the effect was immediate. After my first appointment, I was able to walk out of the acupuncturist’s office after needing assistance to go in. Acupuncture is very potent, in my opinion.”

Mahoney maintains a standing weekly appointment with his acupuncturist, and reports continued positive results. “I’m able to function more or less close to normal. The irregular gait and some pain remain, but the pain is manageable. It’s around a 5, down from an 8 or 9 two years ago.”

East meets West

Anyone considering this approach should thoroughly research an acupuncturist’s credentials before beginning a course of treatment. “With complex neurological diseases such as MS, you need an acupuncturist who understands both the needling techniques and its interaction with the physiology of MS,” Dr. Reed cautions.

As a rule, Dr. Reed adds, a reliable practitioner should be a physician or neurologist certified in acupuncture, or a licensed acupuncturist (LAC) with at least five years of experience treating complex neurological diseases, and in all cases, trained in an accredited program.

This range of practitioners—from MDs to LACs—introduces a broad variance in procedure costs as well as health insurance coverage. NCCAM’s website recommends contacting your health insurance provider directly to see if it will cover full or partial costs of an acupuncturist.

In addition, Dr. Bowling stresses, anyone receiving acupuncture treatments should be cautious with the Chinese herbs that practitioners may dispense at a session’s close. “Chinese herbs have never been studied in MS, so we have no evidence that they benefit persons with MS,” he says. “In fact, these herbs may possess potentially immune-stimulating effects or other negative effects for people with MS. You need to make sure that your physician knows about your acupuncture treatments as well as any herbs you’re taking.”

Dr. Reed predicts that more study data will emerge within the next decade. If that happens, it may explain why and how acupuncture continues to relieve MS symptoms to at least some degree for people like Mahoney and Ashworth.

Donna Shryer is a Chicago-based freelance writer.

For more information and a list of helpful organizations, visit nationalMSsociety.org/acupuncture.