

## **MRI Shows That Acupuncture Treatments Reduce Pain**

By [ED Sussman](#)

*WebMD Medical News Archive*

Dec. 1, 1999 (Chicago) -- Sticking an acupuncture needle into a point in the hand greatly diminishes the amount of brain activity associated with pain impulses, doctors report at the 85th Annual Meeting of the Radiological Society of North America.

In a series of experiments, researchers tell WebMD, the proper placement of the fine acupuncture needle in the area between the thumb and forefinger, called the Hegu point, allowed subjects to tolerate greater amounts of pain. And pictures of the brain before and after acupuncture treatment show dramatic decreases in brain activity -- up to 70%.

"It is important for Western medicine to recognize that these acupoints really mean something in regard to pain relief," says Huey-Jen Lee, MD, associate professor of clinical radiology and director of neuroradiology at the University of Medicine and Dentistry of New Jersey in Newark. Acupoints are certain points on the body that, when pressed or punctured, have beneficial effects for certain ailments.

Lee reported on studies in which healthy subjects, men and women between the ages of 25 and 54, received pain stimuli while they were undergoing magnetic resonance imaging (MRI). The simultaneous procedures allowed doctors to view how and where brain activity occurred without acupuncture and during acupuncture treatments.

When the experiments were repeated after insertion of the acupuncture needle at the commonly used Hegu point, pain levels as seen with the MRI were decreased. Of 12 subjects who underwent the procedure, nine experienced pain relief.

"The data is pretty impressive," Elvira Lang, MD, associate professor of radiology and medicine at Harvard Medical School, Boston, tells WebMD. She says the MRI pictures clearly show a reduction in pain activation. "This shows there really is something going on here." Lee says that because the MRI definitively shows brain activity, it was likely the increased tolerance to pain was real and not just an artifact of treatment, known as a placebo effect.

"The brain actually shows differences," Lee says, "and that is convincing."

Wen-Ching Liu, PhD, a co-author of the study, says, "We found activity subsided in 60-70% of the entire brain."

The use of acupuncture for pain relief is gaining acceptance in the U.S., Lee says. "So many people with pain, whether from cancer, headache, or a chronic, unexplained condition, rely on medications, such as morphine, which can become addicting. Acupuncture has no side effects, and other studies have shown the pain relief it provides can last for months." Liu said there are more than 400 commonly used acupuncture points, or acupoints, on the body, although other practitioners of acupuncture will sometime cite more than 1,000 points.

Lee noted that the FDA has removed the acupuncture needle from its list of experimental devices and now considers it as an accepted medical device.

The study, Lee says, shows that "using a new technology can help us understand how this 2,500-year-old technique works. We still need more tests to understand this. Right now, we still really don't know how this works."

**Vital Information:**

- When patients are stimulated with acupuncture at a point between the thumb and forefinger, they are able to tolerate greater amounts of pain.
- Imaging of the brain shows a decrease in activity in the areas that regulate pain while acupuncture is performed.
- Acupuncture has no side effects, and the acupuncture needle is approved by the FDA as a medical device.