

# Exploring the Use of Cupping Therapy for Carpal Tunnel Syndrome

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You've probably heard of *carpal tunnel syndrome* (CTS) -- hand and wrist pain with numbness and tingling of the thumb, index, and middle finger. Pressure on the *median nerve* in the wrist can produce these symptoms. But have you ever heard of a technique called *cupping* to treat it?

Cupping is a healing method used in folk medicine in countries such as China, India, Arabia, Central Europe, and parts of Africa. Glasses applied to the skin create suction of the underlying skin and soft tissue. The stimulation helps improve circulation to the area.

The technique can be done *dry* or *wet*. Dry cupping is just as described here. Wet cupping adds an additional step of making tiny cuts in the skin that bleed. When the cups are partially filled with blood, they are removed (usually after five to 10 minutes).

In this study from Germany, patients with neurologically tested and confirmed cases of carpal tunnel syndrome were treated with wet cupping or the application of a heating pad (local heat). A heating pad was used as the *control* treatment since this is a commonly used tool in Germany for chronic musculoskeletal pain.

The area treated with both modalities was the skin over the *trapezius* muscle. That's the large muscle that looks like a cape or mantle across the top of the shoulders and down the upper-to-middle back. The effectiveness of treatment was measured in a couple different ways.

First, patients in both groups rated the severity of their pain and other symptoms on a scale called the *Visual Analog Scale*. The patient draws a vertical line along a horizontal line 100-millimeters long (about four inches) to indicate the intensity of pain (numbness, tingling). The left end of the line is no pain. The far right end of the line is the most severe pain.

Then they completed two well-known surveys (DASH, SF-36) to assess general health (mental and physical), function, and quality of life. They also kept a daily diary for seven days to record the effects of their treatment. Any adverse events were written down along with any amount of pain medication used.

Analysis of the results showed that cupping therapy was more helpful than local heat. Symptoms were immediately improved -- even neck pain, which most of the patients complained of in addition to symptoms of carpal tunnel syndrome. Function, ability to complete daily activities, and quality of life all improved significantly more with cupping than with local heat. There were no negative effects of either treatment reported by anyone.

The authors comment that new treatments are needed for carpal tunnel syndrome. The condition is very common and the treatments used to date have not been proven effective. Although

cupping is an uncommon method, it may prove to be worth investigating further based on the results of this first study.

Of course the question comes up: how does cupping work? We are just going off of some theories so far -- the actual physiologic mechanism remains unknown. The first theory is called the *double-crush hypothesis*.

The idea behind this theory is that carpal tunnel syndrome occurs when there has been nerve injury (irritation, compression) in the neck. Carpal tunnel symptoms are then the result of damage to flow of messages along the entire length of the nerve. The cupping applies vacuum pressure to the soft tissues and stimulates blood and lymph flow to the area. This, in turn, improves overall nerve function, even at the median nerve further down the arm.

A second theory is that wet cupping applies a noxious stimulus or counterirritation. The nervous system stops paying attention to the chronic pain of carpal tunnel syndrome and switches instead to this new, local source of nerve signals. The result is to override the chronic nerve pain long enough to turn it off permanently.

And finally, it has been suggested that cupping works simply because the person received some form of treatment and expected it to work. That's called the *placebo effect*. There is a certain amount of placebo effect with any treatment.

Why some placebos are more powerful than others remains another unknown factor. In this study, the local application of heat was already viewed favorably by the control group -- they frequently used heat for pain relief themselves. This suggests that the positive results of cupping was more than just placebo. Otherwise, the local heat group would have likely had just as good of results.

There's plenty of room for further scientific research in this area. This study only performed the wet cupping technique one time and measured results over a seven-day time period. Long-term results remain to be investigated.

Comparing the results to local heat application as the control group isn't the same as comparing it to a group of patients with carpal tunnel syndrome who received no treatment (or even some other modality). Future studies can take those factors into consideration and continue exploring this technique as a potentially safe and effective method of treating carpal tunnel syndrome.

Andreas Michalsen, et al. Effects of Traditional Cupping Therapy in Patients with Carpal Tunnel Syndrome: A Randomized Controlled Trial. In *The Journal of Pain*. June 2009. Vol. 10. No. 6. Pp. 601-608.