

# Acupuncture Improves Headache, Neck Pain

*The modality is put to the test in trials involving 15,000 headache and 13,000 neck pain patients.*

BY NANCY WALSH  
New York Bureau

EXETER, ENGLAND — Data emerging from a large German research initiative sponsored by that country's insurance companies continue to support the use of acupuncture in the treatment of chronic pain conditions.

Two reports from the Acupuncture in Routine Care (ARC) study, presented at a symposium on alternative and complementary therapies sponsored by the universities of Exeter and Plymouth, demonstrated statistically significant and clinically relevant benefits for acupuncture when used in addition to routine care for headache and neck pain.

A total of 15,056 patients with migraine or tension-type headache were enrolled in the ARC headache study and randomly allocated to receive up to 15 acupuncture treatments during a 3-month period along with conventional treatment with analgesics, or to a control group receiving conventional treatment but no acupuncture.

Patients who did not agree to random-

ization received acupuncture and were monitored as a third group, said Susanne Jena, M.D., of the Institute for Social Medicine, Charité Medical Center, Berlin.

Three-quarters of the patients were female, and their mean age was 44 years. Of the 3,182 who agreed to randomization, 1,613 were in the acupuncture group and 1,569 were in the control group.

After 3 months of treatment, the frequency of headache days per month decreased from 8.4 days to 4.7 days in the two acupuncture groups, a significantly greater reduction than in the control group (8.1 days per month before treatment and 7.5 days per month post treatment).

The data also were analyzed according to headache type. Patients with migraine had an average of 7 days per month with headache before treatment and 4 days per month with headache after treatment including acupuncture. For those patients with tension-type headache, the average decreased from 10 days per month with headache before treatment to 5 days per month after, she said.

The improvements persisted for the

next 3 months, she said.

Among the control group, 70% of patients required concomitant treatment with analgesics, compared with 50% of patients in the acupuncture groups.

The second report, which came from the ARC neck pain study, found similar results among 13,846 patients with chronic neck pain. In this cohort, 68% of whom were women with a mean age of 53 years, 1,753 were randomized to receive acupuncture, 1,698 served as controls, and 10,395 who had declined randomization also received acupuncture.

After 3 months of treatment, improvements on the neck pain disability score were more pronounced in the acupuncture groups than in the control group, said Claudia Becker-Witt, M.D., also with Charité. Scores fell from 56.4 to 39.6 in the



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acupuncture groups and from 54.5 to 51.2 in the control group, a statistically significant difference.

In both studies, the acupuncture groups also experienced significantly greater improvements in quality of life.

About 8% -9% of patients in both studies experienced side effects from acupuncture; they were not life threatening.

Analyses of cost-effectiveness and overall health benefits are being done, Dr. Becker-Witt said.

## Red-Tinted Contact Lenses May Offer Fast Migraine Relief

BY DIANA MAHONEY  
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ORLANDO, FLA. — Red-tinted contact lenses provided rapid, safe, nonpharmacologic relief to most patients with acute migraine pain in a recent study.

The red lenses filter specific wavelengths of light that may overstimulate retinal receptors in some migraine sufferers, resulting in the characteristic headache pain that is exacerbated by light exposure, Richard L. Garrison, M.D., reported in a poster presentation at the annual meeting of the North American Primary Care Research Group.

Dr. Garrison and colleague Kathleen Saathoff of San Jacinto Methodist Hospital in Baytown, Texas, presented the results of a case series of 33 patients with a history of photophobic headache who were offered bilateral insertion of special-order red-tinted contact lenses during acute pain attacks. The light-filtering lenses brought immediate pain relief to 31 of the patients.

"With the exception of two subjects—who, in addition to migraine, had diagnoses of photophobic muscle contraction headache and pseudotumor cerebri, respectively—all of the other patients [in the study] had relief within minutes of inserting the lenses, and pain relief was maximal within 90 minutes," Dr. Garrison reported.

All but 5 of the 31 migraine-only patients had total pain relief, and the 5 who did not get full relief had significantly reduced final pain scores of 0.5-1.5 on a 10-point visual analog scale, he said.

To control for a possible placebo effect in future randomized placebo-controlled trials, patients will be treated with contact lenses designed to filter varying wavelengths of light. The lenses them will be colors other than red.

### Benefits From Light Filtering

Tinted glasses, goggles, and, more recently, contact lenses have been used to relieve pain and decrease photophobia in patients with various ophthalmologic conditions.

Because photophobia is so prominent in migraine, Dr. Garrison and Ms. Saathoff, who began investigating tinted contact lenses with patients with cone-rod dystrophy a decade ago in her work with low-vision patients, hypothesized that the light-filtering treatment might benefit migraine sufferers as well.

The inherited progressive disorder cone rod dystrophy causes deterioration of the photoreceptor cells and often results in blindness.

### Ideal Tinting Uncertain

Tinted contact lenses were chosen over ordinary glasses with tinted lenses because the latter allow too much glare to reach the retina, both from the side and above, for sufficient filtering. In contrast, therapeutic contact lenses applied directly on the eye provide optimal filtration, Dr. Garrison said.

In the San Jacinto study, the 30 female and 3 male patients recruited for participation had physician diagnoses of migraine. All patients were instructed to present themselves for contact lens insertion during episodes of acute pain.

The special-order contact lenses were dark red and filtered 80% of the light.

"The sample color was the result of trial and error from previous patients, predominantly with cone-rod dystrophy, who were extremely photophobic and may have experienced blepharospasms," a dystonia that results in uncontrollable contraction of the muscle that causes the eye to blink, Dr. Garrison noted.

No assurance exists, he continued, "that the tint chosen for this series is optimal. The choice of tint was derived solely from experience treating a different disease. Other tints that filter different wavelengths of light may prove to be as or more effective."

### Rapid Onset of Relief

Of the 26 patients reporting total relief of all migraine pain, 5 reported complete relief within 10 seconds of the insertion of the second lens. For most patients, pain relief began within 5 minutes, and approximately 50% relief was obtained within 20 minutes, Dr. Garrison said.

It is unlikely that the migraine relief observed was a consequence of a decreased intensity of light in general. If it were, any

darkening strategy would work just as well, and that's not true, he explained. "People with migraines do seek darkness for partial relief from headache. But even total darkness only diminishes, does not ablate, headache."

In fact, it may be that by blocking certain light wavelengths and admitting others is the key. "Whereas certain tinted filters block stimulation of migraine pain, the admission to the retina of filtered light may actually inhibit migraine," Dr. Garrison hypothesized.

### Of Retinas and Wavelengths

The human retina uses three cone types, with three different absorption spectra, to resolve the wavelength composition of light. These three types of cones, L-, M-, and S-cones, represent classes of photoreceptors that are primarily sensitive to long-wavelength light (L), medium wavelength light (M), and short wavelength light (S) within the visible spectrum.

The lenses used in this case series effectively blocked 90% of wavelengths of 600 nm or less and admitted 90% of wavelengths of 700 nm or more, effectively excluding stimulation of M- and S-cones and allowing selective stimulation of L-cones only, "which may account in some way for the mechanism of action," he said.

These questions as well as others related to the comparative efficacy of other colors of lenses and other ways of selectively exposing the retina to certain wavelengths will be explored in further randomized controlled trials, Dr. Garrison stated.