

# Saying Nighty-Night to Breast Cancer Sleep Disturbance

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For breast cancer survivors whose sleep is compromised by hot flashes, a form of acupuncture is shaping up as a promising alternative to drug therapy.

Electroacupuncture may be as good as — or even better than — the antiseizure medication gabapentin (*Neurontin*, Pfizer) at improving sleep quality in patients with breast cancer who have nocturnal hot flashes, say researchers.

Preliminary results from a randomized controlled trial in 58 breast cancer survivors show that those treated with electroacupuncture had a significantly greater reduction in total Pittsburgh Sleep Quality Index (PSQI) score than those who took a daily dose of 900 mg of gabapentin (change of  $-2.6$  vs  $-0.8$ ;  $P = .044$ ).

They also had improved sleep latency ( $-0.5$  vs  $0.1$ ;  $P = .041$ ) and sleep efficiency ( $-0.6$  vs  $0.0$ ;  $P = .05$ ) when compared with the group prescribed drug therapy, according to Jun J. Mao, MD, from the Integrative Medicine Service at Memorial Sloan Kettering Cancer Center, New York, New York, and colleagues.

The study report [was published](#) on November 28 in the *Journal of the North American Menopause Society*.

"Our results suggest that [electro-acupuncture] results in improved sleep in women with hot flashes and might be a viable treatment option in women who do not wish to take medication," the researchers say.

They add: "Comparative effectiveness studies such as this represent a step forward in providing clinicians and participants with information needed to make better and more informed treatment decisions."

Patients treated with electroacupuncture also experienced more sleep improvements across six specific PSQI domains. They had better sleep duration, less sleep disturbance, shorter sleep latency, decreased daytime dysfunction, improved sleep efficiency, and better sleep quality ( $P < .05$  for all).

"Women receiving electroacupuncture reported they were able to fall asleep faster and spent more time in bed sleeping as opposed to lying awake in bed trying to sleep," Dr Mao and colleagues explain.

By comparison, women in the gabapentin group only experienced improved sleep duration and sleep quality ( $P < .05$ ).

Still, there is room for improvement, the researchers point out. Despite a significant improvement in sleep for women in the electroacupuncture group, their mean PSQI scores remained above the recommended clinical cutoff.

"Further research may need to examine the efficacy of acupuncture as an adjunctive treatment to another pharmacological or non-pharmacological intervention to achieve more complete symptom relief in women with disturbed sleep and hot flashes," they write.

JoAnn Pinkerton, MD, executive director of the the North American Menopause Society (NAMS), is cautiously optimistic.

"This study shows that, for women who need or choose to avoid medications, electroacupuncture may be an option because it has minimal risks, but blinded controlled trials are needed," she said in a statement issued by NAMS.

Breast cancer survivors are at greater risk for severe hot flashes as a result of treatment-induced premature menopause and estrogen deficiency. Hot flashes can strike at any time, but overall health can be affected when they happen at night and disrupt sleep.

Studies indicate that about 30% to 40% of women with breast cancer report persistent moderate-to-severe hot flashes. By 2020, it is estimated that 6 million breast cancer survivors in the United States will make "symptom reduction and maintenance of quality of life a clinical priority," Dr Mao and colleagues note.

For the study, women with early-stage breast cancer (stages 0 to III) were enrolled from November 2009 through June 2013 by physician referral or were recruited during a clinic visit at the Abramson Cancer Center of the Hospital of the University of Pennsylvania. All participants were cancer-free and experiencing at least two hot flashes a day.

Mean age of the study participants was 51.7 years, and most of the women (93%) had a college degree or higher.

Three quarters of the women identified as white and 22.4% as black. Most were in a partnered relationship (71%), most were postmenopausal (86%), and 64% were receiving hormonal therapy.

Women randomly assigned to acupuncture received 10 treatments, delivered at the hospital by two licensed nonphysician acupuncturists over the 8-week study period.

A bilateral 2-Hz current was connected between two acupuncture points using a transcutaneous electrical nerve stimulation unit. The needles were left in place for 30 minutes.

A total daily dose of 900 mg was chosen for gabapentin based on results from an earlier placebo-controlled trial in breast cancer survivors showing that it was effective, the researchers said.

The 19-item PSQI tool was used both before and after treatment to produce a global sleep quality score ranging from 0 to 21, with higher scores indicating poor sleep quality and high sleep disturbance.

While many women have sleep disturbances caused by physical symptoms, such as pain and hot flashes, resulting from cancer treatment, others can't sleep because of psychological issues, such as anxiety, worry, and depression related to breast cancer diagnosis and survivorship, Dr Mao explained in an interview.

There are also those whose sleep is disturbed because of habits such as watching TV or looking at an iPad or smartphone in bed, he said.

Once entrenched, sleep disturbance can amplify preexisting anxiety, depression, and pain, creating a feedback loop that increases overall symptom burden and takes a toll on psychological and physical health.

"Considering that disrupted sleep has been associated with poorer overall psychological and physical health outcomes, effective interventions for disruptive nocturnal hot flashes will likely also improve sleep and a host of other downstream concerns," the researchers say.

Treatment will "likely need to be individualized and may involve a multidisciplinary approach," Dr Mao told *Medscape Medical News*. "Acupuncture may be one of the tools to help breast cancer survivors."

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