

**Editors' Note:** Regarding the American Academy of Neurology (AAN) guideline on complementary treatments for the prevention of episodic migraine authored by Drs. Holland et al., Dr. Charleston summarizes the evidence for 3 additional natural supplements used in migraine prevention:  $\alpha$ -lipoic acid (thioctic acid), vitamin E, and ginkgo biloba. The authors explain why data for these supplements fell short of the standard for the AAN guideline. Authors Drs. Englot et al. and Dr. Gomez-Alonso debate when to recommend epilepsy surgery vs continued trials of antiepileptic medications in reference to "Epilepsy surgery trends in the United States, 1990–2008."

*Megan Alcauskas, MD, and Robert C. Griggs, MD*

**EVIDENCE-BASED GUIDELINE UPDATE:  
NSAIDs AND OTHER COMPLEMENTARY  
TREATMENTS FOR EPISODIC MIGRAINE  
PREVENTION IN ADULTS: REPORT OF THE  
QUALITY STANDARDS SUBCOMMITTEE OF  
THE AMERICAN ACADEMY OF NEUROLOGY  
AND THE AMERICAN HEADACHE SOCIETY**

**Larry Charleston IV, Grand Rapids, MI:** Holland et al.<sup>1</sup> highlighted the evidence of complementary treatments for the prevention of episodic migraine. There are a few natural supplements used in the prevention of migraine or its associated symptoms that were not classified in these guidelines. A review of additional natural supplements may be worthy of examination and classification based on their respective evidence.

One underpowered, randomized, controlled trial of 600 mg/day of  $\alpha$ -lipoic acid (thioctic acid) showed a strong trend for decreased monthly attack frequency ( $p = 0.06$ ). Within-group analysis showed significant reduction in attack frequency, headache days, and headache severity in the treatment group.<sup>2</sup>

Vitamin E effectively reduced the severity of headache pain, abortive headache medication usage, functional disability, and associated migraine symptoms (phonophobia, photophobia, and nausea) in pure menstrual migraine in a randomized, controlled trial.<sup>3</sup> The authors recommended a dosage of 400 IU for 5 days starting 2 days prior to menses.

In an open, preliminary trial, a combination of 60 mg Ginkgo Biloba Terpenes Phytosome, 11 mg co-enzyme Q10, and 8.7 mg vitamin B2 (Migrasoll) was effective in reducing both aura frequency and duration in the study population.<sup>4</sup>

**Author Response: Starr Holland, Savannah, GA; S.D. Silberstein, Philadelphia; F. Freitag, Dallas; D.W. Dodick, Scottsdale, AZ; C. Argoff, Albany, NY:** Dr. Charleston is correct that thioctic acid was not included in the Holland et al. guideline. Upon supplemental review of the article by Magis and colleagues,<sup>2</sup> we agree that it is a double-blind, placebo-controlled, randomized trial of migraine prevention in patients with 2–6 attacks per month, up to 10 days of interval headaches, no medication overuse, and no use of other preventive therapies. This was a 3-month trial that was terminated early due to lack of recruitment, and consequently, the study was underpowered ( $n = 54$  recruited;  $n = 44$  completed; powered for intended  $n = 80$ ). Assessment of the 44 patients who completed the trial (target  $n = 80$ ) showed that significant differences between treatments were not achieved from placebo for monthly attack frequency (primary endpoint). Secondary endpoints suggest a possible treatment benefit, with decrease in attack frequency noted from baseline measures. However, on the basis of this article, further studies are warranted in a larger sample size to determine whether thioctic acid is effective for the preventive treatment of episodic migraine.

Regarding the article by Ziaei et al.,<sup>3</sup> the efficacy of vitamin E for treatment of menstrual migraine was not identified for inclusion in this trial, as the outcomes assessment was limited to acute treatment parameters. Women aged 20–30 years were selected to take 400 IU vitamin E starting 2 days before and through 3 days after menstrual flow began; however, assessment was limited to headache response, and reduction in non-pain-related migraine symptoms, including severity of photophobia, phonophobia, and nausea (reduction of moderate or severe to mild or none). No assessment of reduction in attack frequency, headache days, or other standard headache preventive outcomes was reported.

Finally, the study by D'Andrea et al.<sup>4</sup> was an open-label, uncontrolled trial that assessed the change in aura status following combination treatment of 60 mg Ginkgo Biloba Terpenes Phytosome, 11 mg coenzyme Q10, and 8.7 mg vitamin B2. Standard outcomes used in migraine preventive trials, including frequency of attacks or number of headache days, were not assessed.

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## EPILEPSY SURGERY TRENDS IN THE UNITED STATES, 1990–2008

**Juan Gomez-Alonso, Vigo, Spain:** Englot et al.<sup>1</sup> concluded that after the failure of 2 antiepileptic drug (AED) trials, patients “should be referred . . . for surgical evaluation.” The authors considered their recommendation consistent with the guidelines of the American Academy of Neurology (AAN).<sup>1</sup>

However, what the AAN recommended was the referral of patients “who have failed appropriate trials of first-line AEDs.”<sup>2</sup> The AAN also indicated that “this practice parameter provides no evidence for guidelines on when to abandon pharmacotherapy.”<sup>2</sup> Consequently, both early and late surgery should be accepted as equally valid options, due to the lack of scientific evidence favoring one of them.

Englot et al.<sup>1</sup> considered temporal lobectomy safe. However, while its efficacy is superior to that of a

third AED trial, 36% of surgically treated patients can be left with permanent memory problems.<sup>3</sup> Therefore, undertaking new AED trials after the first 2 failures may appear to both patients and doctors as a less risky and still potentially valuable option.<sup>4</sup>

To avoid the present uncertainty when advising patients, the implementation of a large, prolonged, and independent comparative effectiveness study between medical and surgical therapy in refractory epilepsy could be very helpful.

**Author Response: Edward F. Chang, Paul A. Garcia, San Francisco:** We thank Dr. Gomez-Alonso for raising this issue. It is now clear that even small randomized, controlled trials have sufficient power to demonstrate the superiority of surgical epilepsy treatment over ongoing medical management in controlling seizures. In light of the significant morbidity and mortality associated with uncontrolled seizures, we cannot recommend delaying surgery in patients who are candidates for this treatment. While it is true that subtle changes in verbal memory and naming are often noted on sensitive neuropsychological measures after surgery, these expected changes are much less intrusive in patient functioning than ongoing seizures.

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*Author disclosures are available upon request (journal@neurology.org).*

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**Evidence-based guideline update: NSAIDs and other complementary treatments for episodic migraine prevention in adults: Report of the quality standards subcommittee of the American Academy of Neurology and the American Headache Society**

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*Neurology* 2012;79;1301-1302

DOI 10.1212/WNL.0b013e31826e1296

**This information is current as of September 17, 2012**

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