

# Four New Parkinson's Disease Guidelines Hailed

*Review finds insufficient evidence to show that alternative therapies benefit Parkinson's patients.*

BY AMY ROTHMAN SCHONFELD  
Contributing Writer

SAN DIEGO — Use of alternative therapies in the management of Parkinson's disease is supported only by weak data, according to one of four new practice parameters issued by the American Academy of Neurology at its annual meeting.

Considering that 60%-70% of PD patients turn to alternative therapies, the parameter provides the evidence a clinician needs to answer patient inquiries about their use.

AAN's review also found only weak evidence that exercise or speech therapy improves motor function. There was insufficient evidence to show that patients with PD derive any benefit from acupuncture, biofeedback, chiropractic, *Mucuna pruriens* (a nutritional supplement derived from a tropical legume, also known as velvet bean, that contains levodopa), or the Alexander technique (a form of movement therapy emphasizing correct posture and the proper positioning of the head with regard to the spine), according to the parameters, the 100th set to be issued by the AAN, which is known for the rigor of its guidelines.

An estimated 80% of the AAN membership uses the academy's various practice parameters in their clinical practice. The goals of the parameters are not to dictate decision making but rather to provide neurologists with the information they need to make evidence-based judgments.

The four new guidelines address the diagnosis and prognosis of new onset PD, neuroprotective strategies and alternative therapies, treatment of PD with motor fluctuations and dyskinesia, and evaluation and treatment of depression, psychosis, and dementia in PD. The guidelines tackle previously unexplored issues, and also revisit questions addressed by previous parameters.

For each parameter, the Quality Standards Subcommittee selected a committee composed of movement disorder specialists, a general neurologist, and, in the case of the nonmotor-symptom parameter, psychiatrists. Each committee surveyed the literature published from 1996 to January 2005, and scientifically rigorous studies were selected.

For the treatment of PD with motor fluctuations and dyskinesia parameter, 730 articles were initially identified but only 29 met criteria for inclusion, explained coauthor Dr. Rajesh Pahwa of the University of Kansas, Kansas City.

The use of selegiline, levodopa, or a dopamine agonist for the initiation of treatment for PD is supported by the highest level of data.

For neuroprotection, the panel found that levodopa may be considered for the initial treatment of PD because it does not accelerate disease progression and is safe. However, the neuroprotective value of other medications—including amantadine, coenzyme Q, pramipexole, rasagiline, riluzole, ropinirole, and selegiline—

is unproven. Good evidence is available to discount any protective effects from vitamin E (2,000 U).

For motor fluctuations, the panel recommended that entacapone and rasagiline be offered, while pergolide, pramipexole, ropinirole, and tolcapone may be considered to reduce "off time" in PD. Only weak evidence is available to support the use of subcutaneous apomorphine, cabergoline, or selegiline, and the panel disregarded the use of sustained-release carbidopa/levodopa or bromocriptine.

The panel also updated the evidence on deep brain stimulation (DBS) for motor fluctuations, a matter that it last addressed 7 years ago. Level C evidence (possibly effective) was found for DBS of the subthalamic nucleus, while there was insufficient evidence to make any recommendations about DBS of the globus pallidus interna or ventral intermediate nucleus of the thalamus.

For the first time, the AAN established a practice parameter for nonmotor PD symptoms, reflecting current thought that almost all PD patients are affected with one or more of these problems and that they have serious consequences. For instance, psychosis is the strongest marker for placement of a PD patient in a nursing home and, if untreated, leads to 100% mortality within a year, said coauthor Dr. Jill M. Miyasaki of the University of Toronto. With treatment, mortality falls to 28%. The panel examined whether effec-

tive screening tools and treatments were available for these conditions. While these parameters looked only at depression, psychosis, and dementia, new guidelines in preparation will address other nonmotor features of PD, including other behavioral issues, constipation, lightheadedness, and bladder problems.

The guidelines also will help investigators identify gaps in knowledge that may guide future research. For instance, more evidence is needed to determine whether

DBS of areas other than the subthalamic nucleus is effective for treating motor fluctuations. There is also a need for head-to-head comparisons of medications.

The parameters are available in the April 11 issue of Neu-

rology (2006;66:968-1002) and on the AAN's Web site ([www.aan.com/professionals/practice/guideline/index.cfm](http://www.aan.com/professionals/practice/guideline/index.cfm)). The AAN has also made available guideline summary sheets for clinicians and a separate set for patients and families.

The guidelines "scored an 'A,'" commented Robin A. Elliott, executive director of the Parkinson's Disease Foundation. Mr. Elliott was particularly appreciative of the patient summary sheets, which he felt provided information to patients and their families that was understandable but not patronizing. Noting that only one-third of PD patients are treated by a movement disorders specialist, Mr. Elliott said the parameters "will empower larger groups of doctors to become expert in PD." ■

**Treating Parkinson's-induced psychosis, the leading reason for nursing home placement in PD, lessens 1-year mortality from 100% to 28%.**

## Patient Adherence to CPAP Therapy Elusive Despite New Methods

BY BRUCE JANCIN  
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DENVER — Continuous positive airway pressure is widely viewed as the treatment of choice for obstructive sleep apnea. When used correctly, it results in multiple benefits, including salutary changes in cognitive function, quality of life, blood pressure, and daytime sleepiness.

There's just one problem. Patient adherence with this nonpharmacologic therapy is, in a word: lousy.

At the annual meeting of the Associated Professional Sleep Societies, investigators described a variety of creative methods aimed at improving compliance with CPAP, ranging from a brief behavioral therapy to equipment refinements to psychologic profiling to assess patient readiness to change. None, however, succeeded in boosting nightly use of CPAP above the 6-hour minimum that sleep disorder specialists deem necessary to achieve optimal clinical results.

"Optimizing adherence with OSA [obstructive sleep apnea] treatment may require a multifaceted strategy," concluded Mark S. Aloia, Ph.D., of Brown University, Providence, R.I.

He reported on 148 consecutive

patients with moderate to severe OSA. The first 66 were placed on conventional CPAP. The next 82 in this nonrandomized study received CPAP machines equipped with C-Flex technology. C-Flex, developed by Respirationics Inc., delivers positive air pressure variably in response to a patient's inhalation/exhalation pattern. The hypothesis was that C-Flex would improve adherence by reducing CPAP-users' common complaints of difficulty exhaling, air leak around the mask, and pressure intolerance. The same home health care company was used for all participants in order to maintain consistency.

Adherence data were gathered at 1 week and 1, 3, and 6 months. The good news was the C-Flex group did use their machines more hours per night than conventional CPAP users. Indeed, at 6 months' follow-up, they were three times as likely as CPAP users to be averaging 6 hours per night of PAP. The bad news was the C-Flex group still averaged only 4.5 hours per night of PAP—well below the optimal 6 hours. Conventional CPAP users averaged a mere 3.2 hours.

Melanie K. Means, Ph.D., reported on 33 Veterans Affairs outpatients with OSA and subtherapeutic CPAP use referred to her as a behavioral sleep psychologist. She determined that claustrophobic symptoms were a primary contributor to

CPAP nonadherence in all 33 patients. She then developed a brief exposure-based behavioral treatment intervention aimed at reducing CPAP-related anxiety. The therapy was provided in a mean of 2.5 individual sessions. It involved a series of graded steps and homework assignments to help patients become more comfortable with CPAP.

She reported on 10 patients who completed the behavioral intervention. Five others dropped out of behavioral therapy or stopped CPAP altogether. Six remain in behavioral therapy. Twelve patients were excluded from the study because of a lack of objective CPAP usage data.

During a mean of 79 days of follow-up, CPAP usage improved in 9 of 10 patients. Pre-treatment, patients used their CPAP machine an average of one night in three. At follow-up they averaged two nights in three on CPAP. Their average hours of use per night used increased from 2.3 to 4.3. Averaged over all nights, CPAP use climbed from 0.8 hours to 3.2 hours per night, according to Dr. Means of Duke University, Durham, N.C.

In a separate study, Dr. Aloia and coworkers found that psychologic measures of behavior change constructs derived from the transtheoretical model and social cognitive theory accounted for up to 37% of the variance in average nightly CPAP use over the course of 6 months in a cohort of 101 OSA patients. In contrast, demographic and disease severity measures collectively accounted for less than 10% of the variance.

Assessment at 1 week of measures of readiness to adhere to regular CPAP use were strongly predictive of long-term adherence, as were measures of self-efficacy obtained at 3 months. ■

### Hours of Machine Use per Night at 6 Months' Follow-Up



CPAP with C-Flex (n = 82)



Conventional CPAP (n = 66)

Source: Dr. Aloia