

## Psychopharmacology for the Clinician Psychopharmacologie pratique

To submit questions for this regular feature, please send them to Journal of Psychiatry and Neuroscience/Revue de psychiatrie et de neuroscience, Royal Ottawa Hospital, LG 2044, 1145 ave. Carling Ave., Ottawa ON K1Z 7K4, Canada; fax 613 722-5871. Please include details of any relevant case and your name, address, telephone and fax numbers as well as your email address.

### **Question: Should we encourage the use of high-dose vitamin E in persons with memory complaints as a preventive strategy against Alzheimer's disease?**

A 60-year-old man consults you because he is worried that his memory lapses could lead to Alzheimer's disease (AD). The lapses have been present for some 5 years, but do not interfere with work or leisure activities. He has heard that high doses of vitamin E could prevent AD.

### **Answer**

The first step is to obtain a detailed history from the patient with memory complaints and from knowledgeable informants, to assess whether other cognitive domains (such as language, spatial orientation or executive functioning) are declining or interfering with social and occupational activities. This case history does not suggest early AD.

The issue of preventing AD by identifying persons at risk or in the very early stages is timely because a number of etiology-driven hypoth-

eses can be tested in persons with progressive memory impairment, defined operationally as "mild cognitive impairment." One hypothesis is that excessive oxidative activity in the brain contributes to accelerated neuronal death. Vitamin E would help to protect against brain lipid peroxidation.

One placebo-controlled randomized clinical trial has tested this hypothesis in later stages of AD using a 1000 IU dose of vitamin E twice a day. Vitamin E resulted in a delay in milestones such as death, institutionalization, loss of ability to perform basic activities of daily living, and severe dementia. Unfortunately, an imbalance in the random allocation of patients to placebo versus active treatment groups has led to criticism of these results, and resulted in the opinion of a majority of experts consulted (with 2 dissenting) that high-dose vitamin E was not yet established as an effective treatment for AD. In addition, there is concern about the potential anticoagulant effects of vitamin E in high doses.


Fortunately, a National Institute of Aging-sponsored study is under

way to compare the safety and efficacy of vitamin E (1000 UI twice a day) with donepezil (10 mg daily) or placebo in mild cognitive impairment. The end point of this study is diagnosable AD. This is the first study to involve multiple US and Canadian sites in a preventive strategy against AD, with more to follow using selective estrogen receptor modulators, COX-2 selective inhibitors, and eventually, amyloid-modifying agents.

This particular patient can now be referred to a any one of a number of memory clinics in North America that are enrolling patients in the National Institute of Aging study of mild cognitive impairment. This is the best advice to give right now if the patient wants to try high doses of vitamin E to prevent AD.

**Serge Gauthier, MD, FRCPC**  
Professor and Director  
Alzheimer Disease Research Unit  
McGill Centre for Studies in Aging  
Montreal, Que.

This column is presented with  
the support of

 **WYETH-AYERST**  
CANADA INC.  
Montreal, Canada

**The information in this column is not intended as a definitive treatment strategy but as a suggested approach for clinicians treating patients with similar histories. Individual cases may vary and should be evaluated carefully before treatment is provided.**