LETTERS TO THE EDITOR

RE: “PROSPECTIVE ASSESSMENT OF ESTROGEN REPLACEMENT THERAPY AND COGNITIVE FUNCTIONING: Atherosclerosis Risk in Communities Study”

de Moraes et al. (1) recently reported no effect of hormone replacement therapy on cognitive decline in a well-characterized sample of 2,859 women (48–67 years of age) participating in the Atherosclerosis Risk in Communities Study. The cognitive tests included the Delayed Word Recall Test, the Digit Symbol Subset of the Wechsler Adult Intelligence Scale-Revised, and the Word Fluency Test. In studies of hormone effects on cognition, it is essential to use tests of verbal memory that are sensitive to age, because evidence suggests that hormone therapy might be most beneficial to verbal memory (2). It is not at all surprising that the authors found no effect of hormone therapy on age-related declines in verbal memory, because the study failed to show decline in verbal memory between the first cognitive assessment (1990–1992) and the follow-up assessment (1996–1998). Specifically, on average estrogen users showed no decline (i.e., 0.0 words on a 10-item list), and nonusers showed a decline of 0.1 words. These data show that the test lacked sufficient sensitivity to detect age-related changes in verbal memory, especially in a relatively young sample of women, some of whom were “premenopausal.” Without a test that is sensitive to age-related cognitive decline and without a sample that demonstrates memory decline, it is impossible to test the influence of hormone therapy on age-related memory decline. The conclusion that hormone replacement therapy has no effect on age-related changes in verbal memory is misleading.

The authors are correct in indicating that there is no consensus on the effects of hormone therapy on age-related cognitive decline. Randomized trials of the effects of hormone therapy on cognition, using memory tests shown to be sensitive to age and hormone therapy (3, 4), are under way through the Women’s Health Initiative Study of Cognitive Aging.

REFERENCES

Pauline M. Maki
Laboratory of Personality and Cognition
National Institute on Aging
Baltimore, MD 21224

TWO AUTHORS REPLY

We appreciate the interest that Dr. Maki (1) has shown in our paper (2). We agree with Dr. Maki that our tests may not have been sensitive enough to detect age-related cognitive declines, and, indeed, we suggested in our discussion that “additional tests may have revealed different effects” (2, p. 738). We pointed out in our conclusions that the adjustment for confounding and the lack of a consistent pattern of associations would seem to indicate (our emphasis) that, at least in the relatively younger women included in the analyses, use of estrogen replacement therapy is not associated with age-related cognitive changes. The discussion of the study’s limitations that came before these carefully worded conclusions and the inference that this therapy is not associated (our emphasis) with cognitive declines are a far cry from our concluding, as Dr. Maki erroneously implies, that hormone replacement therapy has no effect (our emphasis) on verbal memory. Obviously, as Dr. Maki underscores, only well-designed clinical trials warrant conclusions about effects.

REFERENCES

Suzana Alves de Moraes
Moyes Szkel
Department of Epidemiology
Johns Hopkins Bloomberg School of Public Health
Baltimore, MD 21205