News Release

Wake Forest University Baptist
MEDICAL CENTER

Estrogen Therapy Does Not Reduce Dementia Risk

WINSTON-SALEM, N.C. – Estrogen therapy does not prevent dementia or even a mild decline in memory function in older women, according to research reported by Wake Forest University Baptist Medical Center and colleagues in two articles in this week's issue of the *Journal of the American Medical Association (JAMA)*.

"The use of estrogen by women 65 years and older to prevent dementia or cognitive decline is not recommended," said Sally A. Shumaker, Ph.D., the national principal investigator for the Women's Health Initiative Memory Study (WHIMS).

The study was designed to test whether estrogen alone, or estrogen combined with a progestin, can lower the risk of dementia or mild memory impairment in older women.

Last spring, the researchers reported the first results from the study – that estrogen plus progestin doubled the risk of dementia in older women and did not benefit global cognition, which includes memory and other basic mental abilities like concentration, language and abstract reasoning. When that study was published, researchers weren't sure if the results would also apply to estrogen alone, the type of therapy given to women whose uterus had been removed.

Now, in *JAMA*, the researchers report on the group of women who took estrogen alone.

"We found a similar, but slightly weaker, trend toward increased risk of dementia among the women taking estrogen alone," said Shumaker, associate dean for research and a professor of public health sciences at Wake Forest Baptist. "Translated to a population of 10,000 older women taking estrogen alone, there would be an additional 12 cases of dementia per year. For 10,000 women taking the combined hormone therapy, there would be an additional 23 cases of dementia per year. Clearly, hormone therapy does not prevent dementia – as was thought when we began this important research."

The researchers also found that global cognition did not improve in women taking hormone therapy and, in fact, was adversely affected.

"This adverse effect was relatively small overall, but was more pronounced for women who started with relatively lower cognitive function," said Mark Espeland, Ph.D., professor of public health sciences at Wake Forest Baptist and a WHIMS coinvestigator.

Wake Forest University Baptist Medical Center
Office of Public Relations and Marketing:
Medical Center Boulevard • Winston-Salem, NC 27157-1015
Phone: (336) 716-4587• Fax: (336) 716-6841
www.wfubmc.edu

WHIMS involved about 7,500 women between the ages of 65 and 79 who were free of dementia when the study started in 1995. Dementia occurs when memory, judgment and other thinking abilities decline substantially, to the point that it interferes with basic day-to-day activities. Alzheimer's disease was the most common form of dementia found among WHIMS participants.

The study also measured noticeable but less severe declines in cognitive function, which affect 20 percent to 30 percent of older adults and, for some, strongly predict dementia and future institutionalization. Neither form of hormone therapy prevented the declines.

WHIMS was conducted at 39 centers across the United States. For the estrogen-alone study, about 3,000 women were assigned to take either a daily tablet of estrogen, sold as Premarin™, or an inactive placebo or "dummy" pill. Another 4,500 women took either a daily tablet of the combination estrogen plus progestin, sold as Prempro™, or a placebo.

WHIMS is part of the larger Women's Health Initiative (WHI), designed to study the effects of hormone therapy as well as the long-term effects of a high-fiber, low-fat diet on heart disease and how vitamin D and calcium affect bone density and fracture rates. These two trials of WHI will continue through 2005.

In July 2002, women in WHI and WHIMS were told to stop taking the estrogen plus progestin therapy because the risks for developing breast cancer, strokes and cardiovascular disease outweighed the benefits. In February 2004, women in the estrogen-only study were told to stop taking their drugs due to an increased risk of stroke, and no benefit for heart disease. Both groups of women are continuing to be followed in order to determine the affects of hormone therapy once treatment is stopped.

As a result of the WHI and WHIMS findings, the U.S. Food and Drug Administration recommends that women who choose to use hormone therapy (either estrogen plus progestin, or estrogen alone) for hot flashes or vaginal dryness, or who prefer it to other treatments to prevent osteoporosis, should take the lowest dose for the shortest time required to provide relief.

"Dr. Shumaker and her colleagues have added significantly to current knowledge of critical health issues in women as they age," said William Applegate, M.D., dean of Wake Forest University School of Medicine. "It's another example of our institution's long history of leadership in the field of women's health."

WHIMS was funded by Wyeth Pharmaceuticals and Wake Forest Baptist. WHI is funded by the National Institutes of Health.

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Media Contacts: Karen Richardson, (krchrdsn@wfubmc.edu); or Shannon Koontz (shkoontz@wfubmc.edu) at (336) 716-4587.

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About Wake Forest University Baptist Medical Center: Wake Forest Baptist is an academic health system comprised of North Carolina Baptist Hospital and Wake Forest University School of Medicine. It is licensed to operate 1,282 acute care, psychiatric, rehabilitation and long-term care beds and is consistently ranked as one of "America's Best Hospitals" by *U.S. News & World Report.*

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