

Public release date: 12-Dec-2005

Contact: Jessica Rowlands

jrowlands@gymr.com

202-745-5059

[GYMR](#)

New study finds that older Americans may improve memory by exercising their brains and bodies

Research presented at ACNP Annual Meeting

New research released today at the American College of Neuropsychopharmacology's Annual Meeting found that older Americans may improve their memory by making simple lifestyle changes – including memory exercises, physical fitness, healthy eating and stress reduction. The study was conducted at the University of California, Los Angeles (UCLA) and funded by the Fran and Ray Stark Foundation Fund for Alzheimer's Disease Research, the Judith Olenick Elgart Fund for Research on Brain Aging, and the Parlow-Solomon Professorship on Aging.

"We've known for years that diet and exercise can help people maintain their physical health, which is a key component of healthy aging," says lead investigator, Gary Small, M.D., Professor of Psychiatry and Behavioral Sciences at the David Geffen School of Medicine at UCLA, " But maintaining mental health is just as important. Now we have evidence which suggests that people can preserve their memory by adding memory exercises and stress reduction to this routine."

The study was the first to test the impact of combining memory exercises and stress reduction with a healthy diet and exercise to improve memory. In the 14-day study, subjects with normal baseline memory performance scores were randomly assigned to two groups (sample size of 17 individuals). In the test group, subjects following a memory improvement plan which included:

- Memory Training – Brainteasers, crossword puzzles and memory exercises, which emphasized verbal skills, were conducted throughout the day to stimulate the brain.
- Healthy Diet – Participants ate five meals daily, which included a balanced diet rich in omega-3 fats, low-glycemic index carbohydrates (e.g., whole grains) and antioxidants. Eating five small meals

throughout the day prevents dips in blood glucose levels and glucose is the primary energy source for the brain.

- Physical Fitness – Brisk daily walks and stretching were done daily to promote physical fitness, which has been found to reduce the risk of Alzheimer's Disease.
- Stress Reduction – Participants used stretching and relaxation exercises to manage stress. Stress causes the body to release cortisol, which plays an important role in memory preservation. Cortisol can impair memory and has been found to shrink the memory centers in the brain.

In the control group, subjects did not make any behavior modifications.

Immediately before and after the 14-day study, each participant's brain function was tested using positron emission tomography (PET) scans to measure activity throughout the brain. After the 14-day study, participants following the memory improvement plan recorded a 5% decrease in brain metabolism in the dorsal lateral prefrontal region of the brain, which is directly linked to working memory and other cognitive functions, suggesting that they were using their brain more efficiently. Furthermore, these subjects reported improved memory, and demonstrated better performance on a cognitive measure controlled by this same brain region.

"Most people do not realize that they are in control of their memory as they get older," declared Dr. Small, "But this research demonstrates that it is possible, in just 14 days, to make simple lifestyle changes that will not only improve memory and brain function, but also will improve overall health and wellness."

The next step in this research is to better understand the specific effect of each individual component of the memory improvement plan to determine which combination of healthy lifestyle strategies produces optimal results.

###

ACNP is holding its Annual Meeting December 11-15, 2005, in Waikoloa, Hawaii.

ACNP, founded in 1961, is a professional organization of more than 700 leading scientists, including three Nobel Laureates. The mission of ACNP is to further research and education in neuropsychopharmacology and related fields in the following ways: promoting the interaction of a broad range of scientific disciplines of brain and behavior

in order to advance the understanding of prevention and treatment of disease of the nervous system including psychiatric, neurological, behavioral and addictive disorders; encouraging scientists to enter research careers in fields related to these disorders and their treatment; and ensuring the dissemination of relevant scientific advances. A non-profit organization, ACNP receives revenues from a variety of sources including membership dues, publication sales, registration fees, and pharmaceutical industry grants.
