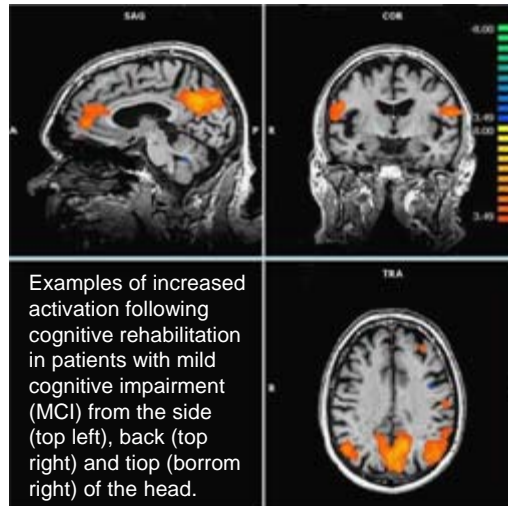


Winter 2009

New Study Hopes to Train Brains to Cut Down on Memory Loss

Scientists at the Atlanta VA Medical Center's Rehabilitation Research & Development Center are investigating the use of cognitive rehabilitation to help maximizing memory in patients who have been diagnosed with mild cognitive impairment (MCI), a condition that often progresses to Alzheimer's disease. Cognitive rehabilitation is a general label for interventions that can be used to improve functioning in areas such as learning and memory. Dr. Benjamin Hampstead, the neuropsychologist leading these studies, says, "An especially unique aspect of this research is our use of functional magnetic resonance imaging, which allows us to examine changes in brain activity that result from cognitive rehabilitation."



Excitingly, patients are showing increased brain activity and communication between brain regions that are known to be abnormal in MCI and Alzheimer's disease. "We hope to identify key brain regions that are functioning well and then develop cognitive rehabilitation strategies that will utilize those regions. Conversely, we will also want to find ways of working around regions that are not functioning well." These changes are currently being compared to those from healthy elderly individuals, which will provide additional insight into how the brain changes as a result of Alzheimer's disease.

Hampstead and his colleagues have examined these changes using two different types of memory tests. So far, the cognitive rehabilitation has significantly improved patients' memory for this information and they have maintained this improvement for at least 1 month after training.

Hampstead emphasizes, "We cannot cure Alzheimer's disease but we hope to find ways of improving our patients' quality of life and helping maintain their independence for as long as possible."

About the Researcher...

Dr. Benjamin Hampstead is a licensed Clinical Psychologist specializing in Clinical Neuropsychology. After earning his bachelors degree from Macalester College in St. Paul, he worked as a research assistant at the National Institutes of Health. Dr. Hampstead earned his Ph.D. from Drexel University in Philadelphia and completed his Fellowship in Clinical Neuropsychology at Emory University in Atlanta.

Dr. Hampstead's primary research interests involve the neural correlates of learning and memory. Through a Career Development Award from the Department of Veteran's Affairs, and in collaboration with Dr. Krish Sathian and Dr. Anthony Stringer, he is investigating methods of improving learning and memory through cognitive rehabilitation. This work primarily focuses on memory rehabilitation in patients with mild cognitive impairment (MCI), a diagnostic category that often precedes Alzheimer's disease (AD). An especially novel aspect of this work is the use of functional magnetic resonance imaging (fMRI), which allows investigators to examine the changes in brain activity that result from rehabilitation. The long-term goal of this work is to identify the neural substrates of effective strategies and use this information to develop more effective interventions to prolong functioning in those with MCI and AD.



Dr. Benjamin Hampstead



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We are trying to learn all we can about how people who have trouble with their vision manage their medicines.

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- You will be compensated \$20 - \$40 for your time
- You will complete vision & thinking tasks, surveys & questionnaires
- This research study will be held at the Rehabilitation Research and Development Center (12th floor) at the Atlanta VA.

Interested? Call us at: (404) 321-6111 ext. 4048 or 2561 to find out more!

Awards & Accolades

Machelle T. Pardue, Ph.D. has received the Research Career Scientist award from Rehabilitation R&D, VA Central Office.

Machelle Pardue, Ph.D., David Ross, MSEE, Med, Krish Sathian, M.D., Ph.D. and **Ronald Schuchard, Ph.D.** recently received VA funding for scientific projects:

Ben Hampstead, Ph.D., Anna Moore, Ph.D. and **Krish Sathian, M.D., Ph.D.** were recently published in the Journal of the International Neuropsychological Society.

Minoru Shinohara, Ph.D. had two articles published in the January issue of Medical Science Sports Exercise.

Claire Barnes, Ph.D. recently had a paper accepted for publication in Documenta Ophthalmologica.



In Remembrance...

Dr. Strawberry K. Gatts, age 63, died of cancer on Tuesday, December 30th, 2008. Dr. Gatts held a BA in Psychology from the University of California-Riverside, a Masters in Public Administration from California State University, and a PhD from the University of Oregon in Human Physiology specializing in Motor Control and Biomechanics.

Dr. Gatts had many unique interests including designing and making jewelry and clothes. She was also an early pioneer in holographic imagery and is listed in "Who's Who in Holography 1978-79" published by the Museum of Holography. Dr. Gatts was a documented Tai Chi master in the lineage of Professor Huang Wen Shaun and Dr. Marshall Ho'o (Blackbelt Hall of Fame, 1973). She dedicated much of her life to the scientific study of the impact of classic Tai Chi in rehabilitating balance and movement dysfunction.

A recent recipient of a Rehabilitation Research and Development VA Career Development Award, Gatz moved to the Atlanta VAMC to pursue her Tai Chi research in late 2008. A memorial service for Dr. Gatts was held on January 6th, 2009 at the Atlanta Veterans Administration Memorial Chapel.