

"I want to do all that I can . . ."

A new program — Cognitive Fitness — may be an option for those who ask, "What specifically can I do to help maintain my memory?"

by Carol Edwards

What is Cognitive Fitness? At the Penn Memory Center, it's 24 sessions of brain stimulation, learning to use tools to compensate for memory problems, and strategies to reduce the stress and anxiety that may accompany and worsen declines in memory and thinking capability.

The program is open to older adults with normal memory and thinking, mild cognitive impairment (MCI), or very early Alzheimer's disease.

The six individuals now in a pilot version (classes will accommodate 10 when the program opens to full enrollment in March 2012) have a wide range of backgrounds and current pursuits. Some are still working, others volunteer in community or faith organizations, others are simply enjoying retirement. But each has a goal similar to that of participant Gail Warburton, age 72; "I want to do what I can, and all that I can, for as long as I can," she said. "And when it comes to my memory, a class like this may help me to do that."

Techniques and Practice

After retiring from a long career in the insurance industry, Gail enjoyed eight years working part-time as a receptionist in her dentist's office. But when the computer system there was updated, "I just couldn't catch on to the changes," she said. "I told the doctors I worked with that I was having trouble with my memory, and I asked to leave the position."

After some investigation, Gail learned of the Penn Memory Center. She was evaluated by Dr. Steven Arnold and diagnosed with MCI. She joined a brief PMC research study and enjoyed the staff and the experience, "so when I heard about the cognitive fitness program, I was excited. After experiencing it, I still am. I'm already working on some helpful techniques." For instance?

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photo | Carol Edwards

Brain stimulation, relaxation, more

Gail Warburton works on an exercise to help the brain process sound during a recent session of the Penn Memory Center's newly-launched program — Cognitive Fitness.

At right, a participant rests his hands easily on his lap to begin a relaxation exercise. By learning to reduce anxiousness, participants can ready their minds to better receive and process the compensatory memory techniques and strategies presented in the course.



"I learned that when those of us with memory problems have trouble following a conversation, it may not be just our hearing; it could be the brain 'mis-processing' sound. One of our exercises helps you to listen in a way that trains your brain to process sound better."

Gail's mother and her father's sister died with dementia, so she knows that sometimes, cognitive losses simply can't be worked around. But her hope is "if I'm headed there someday, maybe I can slow down the process by exercising my brain now. Today's lessons were



At some sessions, participants invite a spouse, partner, or friend to attend. They'll work together to implement at home the strategies learned in class. Bill Atlee's wife Jean joins him at one such class.

harder than last week's, and I enjoyed the challenge, so I think I've got a good outlook on the whole experience."

A response to requests

"The idea for this program was to offer MCI or very early AD patients, as well as older adults with normal memory who want to keep it that way, a good answer to the question, 'What specifically can

I do to help sharpen my memory?'" said Felicia Greenfield, MSW, LSW, Associate Director for Clinical and Research Operations at the PMC, and one of four program facilitators.

The strategies taught in Cognitive Fitness can't take hold in an anxious mind, and facing cognitive loss can generate deep anxiety.

So participants practice steps all of us could use to calm the mind, relax, and better receive and process information.

Computer-based brain stimulation is among key components. "We use Posit Science, interactive computer-based training which research indicates helps improve performance more compared to other brain stimulation programs that are equally rigorous, or to no stimulation at all," said Penn Memory Center Director Steven E. Arnold, MD.

We also cover "compensatory strategies and organizational tools and systems, such as a memory support calendar," said Greenfield, "and show the support capabilities of smart phones, iPads, and GPS." At some sessions, participants invite their spouse, partner, or a close friend to attend. "They learn to work together to increase the at-home success of strategies taught in class," she said. There are also assignments to be done outside class time, including practicing techniques to calm the mind and reduce stressful feelings.

First, ready the mind

Compensatory techniques and strategies "can't take hold in an anxious mind, and facing cognitive loss can generate deep anxiety," said Melissa

Livney, PsyD, a clinical psychologist in the Section of Geriatric Psychiatry and the Penn Memory Center, who leads the Cognitive Fitness program's 'Mindfulness' component.

"Anxiety sets off a chain of physiological events that make it difficult to think or process information," she said. "People with cognitive problems have trouble in these areas as it is, so when they are anxious, they are especially hampered. So we learn simple steps all of us could use to calm our mind and focus only on the moment. This helps create some distance from the stressors we feel, which lets us relax. Then we can better receive and process information."

"Life is different, not over"

Like most group-based experiences, Cognitive Fitness is different things to different people. One participant sees the classes as "real work, not warm and fuzzy stuff." Another "values the support and commonality I find here."

Class member Toni Hamilton has a foot in both camps. "I was thrilled to try a rich, varied program that may help my brain resist further deterioration," she said. "But I was equally eager simply to meet and learn from others who are in my situation. Before this class, I didn't know anyone else with a diagnosis of MCI or Alzheimer's disease."



The Cognitive Fitness curriculum includes homework. Participant Toni Hamilton completes an assignment in her home office.

When Toni, age 71, first told friends she was starting to have memory issues, “the response was usually, ‘Don’t worry, everyone our age has memory issues,’” she said. Hoping her friends were right, she tested to enter Penn Memory Center’s normal control research program — but her cognitive scores fell below normal for someone of her age and level of education. Her reaction? “Pure panic,” she said. “I never failed a

test in my life. All I could think was, ‘My brain isn’t normal, my life is over.’”

Still, “I was never very good at being a passive observer in my own life,” Toni said. She sought a full evaluation with Dr. Steven Arnold at the PMC, followed by more definitive testing, including examination of cerebrospinal fluid via a lumbar puncture. She joined the REVEAL research study, which helped her better understand her diagnosis of MCI and her risk of developing Alzheimer’s over time. She completed an 8-week Penn-based Mindfulness Meditation course. Techniques she learned there are also practiced in Cognitive Fitness classes. Forty minutes of calming meditation is now part of her daily routine.

“All these things have helped me realize that my life is not over,” she said. “It’s different, but it’s not over.” Her involvement in Cognitive Fitness has helped reinforce that philosophy. “Overall, I’m in a much better place than I was when I first heard my diagnosis,” she said. “My outlook on my future is moving from anxiety to curiosity. Twice a week, I walk from Center City to the class looking forward to taking part, and I always walk home glad I went.” ■

More about Cognitive Fitness at the PMC

- *New sessions of Cognitive Fitness at the Penn Memory Center begin in March 2012. Classes meet for three hours, twice a week, for 12 weeks.*
- *Older adults with normal memory and thinking, or a diagnosis of Mild Cognitive Impairment (MCI) or very early Alzheimer’s disease may enroll.*
- *This is an intensive educational/treatment program; it is not research participation. There is a program fee, which is not covered by insurance. For further information, contact Felicia Greenfield, MSW, LSW at 215-614-1828 or felicia.greenfield@uphs.upenn.edu*

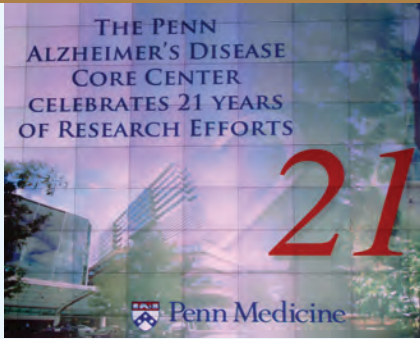


Someday, research will discover the way to make life-long brain health possible for all, and the phones at the Penn Memory Center will fall silent. Until then, “we need to process an ever-increasing number of calls, and still give callers appropriate personal attention as needed,” said Felicia Greenfield, MSW, LSW, Associate Director of Clinical and Research Operations at the PMC. “The new phone tree should help achieve that.”

Routine calls, such as requests for prescription renewals, are now handled by a fully automated system.

This improves accountability and frees front-desk staff to promptly answer calls from those seeking an appointment, or who have more complex requests.

Callers now hear a menu of choices that can connect them instantly to the specific person or function they require. “The complaint about these systems is ‘you can’t talk to a human,’” said Greenfield. “But auto-processing routine calls improves accountability, and frees our front-desk staff to answer appropriate calls promptly and give callers the full attention they require.”



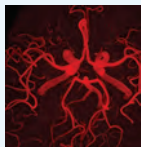
In recognition of 21 years as an NIA-designated ADC

Researchers, physicians, staff, and study participants joined Perelman School of Medicine Dean **J. Larry Jameson, MD, PhD**, and Alzheimer's Disease Core Center Director **John Q. Trojanowski, MD, PhD** at a recent reception marking Penn's 21st anniversary as a member of the National Institute on Aging Alzheimer's Disease Center network. **Max Buten**, long-time PMC normal control research participant, was among the event's speakers. He's pictured (above, right) with fellow PMC normal control **Clarissa Allyene** (center), and Dr. Trojanowski. The Penn Memory Center is one of only 30 ADCs in the nation and the only site in our tri-state region. The highly esteemed designation and grant support is earned by leading universities and medical institutions offering state-of-the-science diagnosis, treatment, research, and more for individuals with AD, mild cognitive impairment, and other age-related progressive memory disorders.



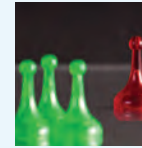
Presentation to Vascular Dementia Researchers

Scientists from across Europe and the globe who study how factors such as elevated blood pressure, cholesterol, obesity, and stroke contribute to cognitive disorders gathered in Riga, Latvia in October for the 7th International Congress on Vascular Dementia. **Steven E. Arnold, MD**, Director of the PMC, spoke to the assembly on the topic of insulin resistance in Alzheimer's disease. Presentations and discussion there "reflected the complexity of AD and vascular dementia's intimate co-existence," said Dr. Arnold. "The field is starting to move beyond parsing out one from the other, because the biological mechanisms of each continue to show more and more similarity."



Berkman Charitable Trust funds Vascular Dementia Research

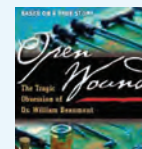
"A wonderful, small, family foundation that will have big impact," said PMC Director **Steven E. Arnold, MD**, describing the **Allen H. and Selma W. Berkman Charitable Trust** and their recent gift to Penn's Institute on Aging. Funds will fuel a PMC-based imaging and biomarker study of vascular risk factors for dementia. A PMC white paper written for the trust "sparked them to help us answer the very important question, 'How much vascular disease exists in older adults with normal cognitive function, and how does it affect cognition over time,'" said Dr. Arnold. The grant will fund research to run over several years.



When AD is known prior to symptoms, safeguards needed

New tools that can diagnose AD ever-earlier continue to emerge, while effective interventions against the disease remain elusive. "It's only a matter of time before we are able to identify Alzheimer's before any symptoms appear, like we've done with cholesterol and heart disease," said **Jason Karlawish, MD**, Associate Director of the Penn Memory Center, in a Penn Medicine Press item. The piece relates to Karlawish's article, "Addressing the ethical, policy, and social challenges of pre-clinical Alzheimer disease," published in the journal *Neurology*, October 11, 2011. "We need to develop systems now, to navigate the challenges of a pre-clinical Alzheimer's diagnosis," he said. "Given the unique nature of this disease, which strips people of their independence as it progresses, safeguards are needed to protect those at high risk or with a pre-clinical diagnosis."

<http://tinyurl.com/safeguards-workplace>



Physician, Researcher, Novelist

Jason Karlawish, MD, Professor of Medicine and Medical Ethics and associate director of the PMC is also the author of "*Open Wound*, a marvelous historical novel tracing the peculiar career of a 19th century doctor . . . which draws clear parallels between the rough American frontier and the primitive state of medical research," writes the *New York Times*.

<http://tinyurl.com/openwound-nytimes>

Research is a chief mission of the Penn Memory Center, with studies for older adults with memory problems and those with normal cognition.

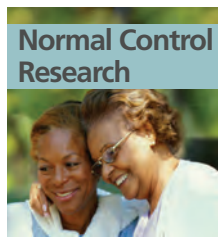
Testing experimental drugs that could fight the Alzheimer’s disease process is an important part of PMC research. But there is much more to Alzheimer’s-related research today than drug trials, including



This research tests new ways to diagnose and understand AD and MCI earlier and better. Using innovative types of brain imaging, brain stimulation, EEG, or tests of blood and cerebrospinal fluid, diagnostic studies seek to precisely pinpoint changes in the brain that cause problems with memory and thinking.



The scope of this research ranges from a single session to multi-year efforts. These studies examine areas of interest such as the relationship between early life stress and late-life cognition; how awareness of genetic risk factors for disease may affect quality of life, and various other topics.



Studying those who remain cognitively well into their 70s, 80s, and beyond helps science pinpoint what goes wrong, and when, in the brains of those with age-related cognitive disorders. Older adults with normal memory are welcomed in all types of studies at the PMC.

Help science —personally — through PMC research. See more at www.pennadc.org.



At this season of reflection, and looking ahead, please consider supporting the research of the Penn Memory Center

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Scenes from the 5th Annual Penn Memory Center Research Partner Thank You Breakfast, October 1, 2011



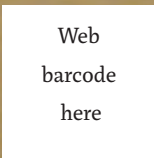
See more photos of this event and other PMC events and activities at the PMC website, www.pennadc.org



The Penn Memory Center's website is now completely redesigned. Take a virtual walk through and see what's new.

A clean, fresh look, easy navigation, and valuable, continually updated content are what you'll find at the new Penn Memory Center website. We invite you visit.

www.pennadc.org



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On people and efforts that bring the knowledge we seek on Alzheimer's disease and life-long brain health ever closer in sight

- The Penn Memory Center is a National Institute on Aging-designated Alzheimer's Disease Center (ADC), one of only 30 such centers in the United States, and the only one in our tri-state region.
- Our staff and programs are dedicated to research in Alzheimer's disease, age-related cognitive problems and life-long brain health, and improving the well-being of our patients and their families.
- Produced by the Penn Memory Center, part of Penn Medicine. We welcome and encourage your questions, comments, suggestions, and gifts.

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