

# New Interventions for Productive Aging

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Cindy Lustig

A very special guest was in attendance at the APS Convention symposium on “New Interventions for Productive Aging,” sponsored by the National Institute on Aging: Angela Little, an Emeritus Professor of Biochemistry at the University of California, Berkeley. At the age of 89, she exercises every day and learns new languages. As her nephew, symposium speaker and APS Fellow Arthur Kramer (University of Illinois at Urbana-Champaign), bragged, “she is the perfect example of productive aging.” How does she do it? And can we be like her? The panel, chaired by APS Fellow and Charter Member Denise Park (University of Texas at Dallas) and featuring Cindy Lustig (University of Michigan), and Elizabeth Stine-Morrow (University of Illinois at Urbana-Champaign), in addition to Kramer, gave us a glimpse into the answers.

We’ve all seen the ads for brain exercises to keep mental decline at bay (Facebook even has a brain training program now). It’s become increasingly clear that these interventions, although potentially successful in the short-term, are largely limited to the exercises themselves or to tasks closely related tasks. The sought-after prize is transfer — training that leads to improvements across domains. This is where many early training programs failed, and it remains a major challenge today. So researchers have begun to try new approaches such as using neuroimaging to identify trainable processes that are important for many different tasks, cardiovascular training (what’s good for your heart is good for your brain!), and wholesale lifestyle enrichment (see the report “Enrichment Effects on Adult Cognitive Development: Can the Functional Capacity of Older Adults Be Preserved and Enhanced?” in *Psychological Science in the Public Interest*, Vol. 9, No. 1, for more in-depth treatment of the subject).

Lustig discussed emerging cognitive interventions that focus on training component processes that are important to many different tasks in a cognitive domain. “As the baby boomers get older,” she said, “they don’t really like this idea of cognitive decline so much.” In particular, older adults complain about memory problems, so Lustig has made memory the target of her research. She has experimented with methods that guide participants to direct their attention and efforts more effectively (e.g., by requiring them to spend a sufficient amount of time on the initial learning of information before the test) and found promising evidence for transfer to both laboratory tests of memory recall and reductions in real-world memory errors. So rest assured, your fellow research psychologists are hard at work on the problem.

After realizing that narrowly focused training doesn’t always provide the magic bullet, Kramer, Stine-Morrow, and Park decided to try something different. Instead of running participants through controlled exercises in the lab, they created lifestyle enrichment programs lasting anywhere from 12 weeks to 10 months. The results have been remarkable. One program, Experience Corps (conducted by Michelle Carlson, George Rebok, and Linda Fried at Johns Hopkins University), recruits volunteers over age 60 to work in Baltimore elementary schools for 15 or more hours a week. Volunteers experience physical,

cognitive, and social benefits, including significant improvements on cognitive tasks (showing they attained some of those elusive transfer effects).

Another lifestyle enrichment approach is Stine-Morrow's Senior Odyssey program (modeled on the well-known educational program, Odyssey of the Mind). In addition to providing its participants with weekly activities, the program includes team-based collaborative problem-solving over several weeks, incentives, and competition. Prior to the start and at the end of the program, Stine-Morrow tested the participants on a variety of cognitive tasks and found measurable improvements in processing speed, inductive reasoning, and visual/spatial skills, among others. Stine-Morrow thinks this kind of enrichment works because it provides contextualized practice of component skills and habitual engagement with executive control.

Park has spent her research career improving the lives of older adults. And she, too, saw promise in creating a long-term enriching environment for the aging mind to see if wide-reaching improvements can be made this way. Her version is called the Synapse Project, and its participants took quilting and photography classes (which are harder than you think) in a stimulating social setting for 3 months. Park is currently conducting follow-up tests, and she cautiously expects incremental improvements in cognition.

All of the researchers share the common goal of creating healthy older minds through various interventions, from narrow to broad in scope, and they presented exciting developments that bring all of us closer to that goal. "Understanding how to slow the [cognitive aging] process to help develop real public health recommendations," Park said, "is the number one health problem at the moment that our country is facing that we could resolve."