Empowering the Elderly
Calisthenics for the Brain

Exercise is faithfully accepted as a way to stay physically fit, and the correlation between fitness and exercise is what many would term a “no-brainer.” This term seems out of place, however, in the context of the study conducted by Karlene Ball, Ph.D., which was featured recently in *The Journal of the American Medical Association*’s (JAMA) special issue on aging. Ball’s study launches the simple fitness-exercise relation into unfamiliar territory: cognitive decline in the elderly.

The study, appropriately labeled ACTIVE (Advanced Cognitive Training for Independent and Vital Elderly), involved 2,832 participants in six U.S. cities, and was made possible by funding from the National Institute on Aging and the National Institute of Nursing Research. An application for a grant to extend the study for another four years is currently under review.

FLEXING THE MENTAL MUSCLE

The 2,832 participants were randomly split into four groups, three of which received training in either memory, reasoning, or speed of processing, while the fourth group received no training.

All three groups receiving training showed overall improvements in the targeted cognitive abilities, with 87 percent of individuals in the speed-of-processing group showing significant improvement, 76 percent of the reasoning group, and 26 percent of the memory group. Half of the people in each training group were randomly selected for “booster” training in addition to the regular training, and people from these groups showed the highest rates of improvements.

BREAKING NEW GROUND

Ball says that it was the study’s novel approach to a very old and common problem that caused *JAMA* to feature it out of some 260 submissions.

“There haven’t been any [studies] that have really looked at whether we can change behavior, or improve performance without a medical treatment, and see some benefit on medical outcomes.”

“I think the mind-set has been that when you get older your memory will get worse and you won’t think as quickly,” she continues. “But we challenge our minds when we go to college and graduate school, so why can’t [we] continue to do that?”

THE FUTURE OF MENTAL FITNESS

“We’ve been flooded with phone calls from older people, asking what they could do to improve their cognitive abilities,” Ball says.

There are plans for more widely available, home-based training programs for older people, but in the meantime, activities such as crossword puzzles and reading the paper are good ways to stay mentally sharp. As for the continuation of the study, the grant application will play a key role.

“For this particular sample, we’ll just want to follow them over time,” Ball says, but adds that for future studies, they may combine the different types of training to produce more generalized results that would be more applicable to everyday activities.

The implications of this study on society as a whole are far-reaching. If simple mental training, as opposed to expensive medication, can slow cognitive decline in adults who are living longer in increasing numbers with each passing year, then pressing problems concerning aging could be delayed well into the future.
Combining Old and New Therapies

THE BEST OF BOTH WORLDS

Burgio and Goode are recruiting 160 women to participate in the study. The women will be randomized into two groups, one of which will receive both drug and behavioral therapy, while the other will receive only drug therapy. Participants in the study will receive free medication for a year, provided that they qualify for care at the VA.

The behavioral therapy will consist of the patient keeping a daily “bladder diary,” in which she will record her bladder activities, as well as physical training in controlling the muscles around the bladder opening.

“If this study shows that behavioral therapy adds significantly to drug therapy, then urology practices, ob/gyn practices, and even primary care practices could add behavioral therapy as a way to optimize the benefits of the medications they prescribe,” says Goode.

THE ROAD AHEAD

Much progress has been made in introducing behavioral therapy in clinics and hospitals throughout the country, but there is much still to be done.

“When I started doing this research in 1981, almost no one was using behavioral therapy,” says Burgio. “Now these treatments are available in just about every state and every major city.”

Even so, Burgio acknowledges that the proliferation of behavioral therapy is just the beginning. “Being published in JAMA helps because physicians will take the study seriously. That’s the first step, because if physicians don’t buy it, nobody will,” she says.

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Combining Old and New Therapies
Dealing with Dementia
From Research to Clinical Care

Alzheimer’s disease (AD) is a crippling illness that ruins people’s lives and tears families apart. Worst of all, there is no cure. There is treatment, however, and Andrew Duxbury, M.D., and Alan Stevens, Ph.D., of the UAB geriatrics program, have devoted themselves to improving Alzheimer’s treatments.

ANDREW DUXBURY, M.D.

Duxbury is associate professor of medicine in geriatrics, and works closely with Alzheimer’s patients and their caregivers to make dealing with the disease more manageable. He spends much of his time with families and patients who are battling dementing illnesses (usually AD), creating and bolstering caregiving systems that ease the painful conditions imposed by the illness. He focuses not only on the health and well-being of the patient, but also on that of the caregiver, who is equally at risk for pitfalls commonly associated with Alzheimer’s, such as depression.

“I have a general approach, which I call ‘The Safe and Sane Rule,’” Duxbury explains. “My goal is safety for the patient and sanity for the caregiver, and every intervention I make tries to meet one of those two criteria.”

In addition to his direct family interventions and behavioral training, Duxbury works to improve conditions for sufferers of AD by increasing awareness of the disease, which is often misunderstood by the general population as well as by people in health care. Duxbury conducts a seminar series on geriatrics for students interested in health care, in order to demystify some of the diseases and conditions related to aging.

“Most students starting out in health care assume that there’s little to be done for the demented, or that the health-care system is not the place to take care of these people. It’s my job to start showing them the real nature of the disease and the complicated ways it affects individuals and families,” Duxbury says. “It usually requires right-brain thinking in the left-brain world of medicine.”

Duxbury’s road to geriatrics was firmly grounded in his beliefs about medicine and life, thanks to advice from a professor at the University of California-Davis who told him to figure out who he was before trying to figure out what branch of medicine he wanted to pursue.

“I went home and developed a list of the things that I believed about medicine. I was more interested in health than in disease; I was more interested in people than in pieces of people; and I did not think doctors had all the answers,” says Duxbury. “I did not think it was possible to be a good physician for a patient if you did not know that patient as a person.”

Even though Duxbury has chosen one of the more challenging and less traveled paths of medicine, it is a decision that sits well with him at day’s end.

“For me, it was a natural mesh, which I have not regretted.”

ALAN STEVENS, PH.D.

Alan Stevens, Ph.D., is a researcher in geriatrics at the Center for Aging (CFA), and provides the scientific background for new programs and treatments for AD and other forms of dementia. Stevens is currently the UAB principal investigator for REACH (Resources for Enhancing Caregiver Health) II, a collaborative research project with the University of Alabama. REACH II is a continuation of REACH I, which consisted of research-oriented interventions with caregivers and sufferers of Alzheimer’s. Researchers in REACH I examined the specific conditions of each household and then implemented customized risk- and stress-management strategies that would benefit both the caregiver and the patient.

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Dealing with Dementia
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“Our focus is to go in to the home, assess the caregiver on an individual basis, identify needs, assess the family situation, and then try to provide training in skills that we think will improve caregiving and improve the quality of life for the AD patient,” says Stevens. Though the challenge is a daunting one, successful findings could provide a strategy for reducing the symptoms of Alzheimer’s disease and benefit thousands of afflicted families. Even though the disease is incurable, Stevens and others remain hopeful.

“If we can reduce the number of problem behaviors, we can help reduce the burden related to those problem behaviors,” says Stevens. The project is currently funded for another year and a half by two institutes of the NIH: the NIA (National Institute on Aging) and the NINR (National Institute of Nursing Research).

The Center for Aging produces and distributes “A Caregiver Resource Guide,” designed to help people effectively care for sufferers of AD. It also contains application forms for REACH II. The resource guide can be obtained by calling the CFA’s Alzheimer Family Program at (205) 934-2178 and by e-mail at eroberst@aging.uab.edu.

Center for Aging Board of Counselors Reception

A reception held November 2002 to thank Center for Aging supporters was an absolute success, according to the more than 200 attendees.

“I thought it was excellent. It really was,” said reception speaker and CFA supporter Cameron Vowell, Ph.D. “I was extremely pleased.”

The reception was in many ways a marked departure from most informative events, in that it operated on an informal structure that included no lectures and offered members of the Birmingham community the opportunity to become acquainted with CFA doctors and professors and learn about their current projects. Guests at the reception were able to speak directly with different physicians and professors while relaxing in a “cocktail party” atmosphere.

“It was a very informal, convivial event, so I hope that it worked to make a lot of the community persons aware of what the center wants to do,” said another reception guest and CFA supporter. “A lot of people didn’t want to hear one more lecture, so we reassured them that it would be informal and that the discussion would be spontaneous.”

Despite the reception’s more flexible framework, many of the guests engaged the doctors and physicians in dialogue and came out of the reception feeling that they had really learned something.

“It really was sort of an exploratory effort to see what sort of interest there was on the part of the general public,” said Vowell, “and I think everybody was very pleased.”

A similar event is being planned for the fall of 2003.

INTERESTED IN AGING?

If you would like to learn more about the UAB Center for Aging or are interested in supporting the research, education, and outreach activities of the Center, please contact George Mickwee at (205) 934-9261 or Martha Frankel at 934-0232 or mfrankel@uab.edu.

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