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## Exercise and Setting Ease Alzheimer's Effects

By ANAHAD O'CONNOR

For many, a diagnosis of Alzheimer's disease can mean life in a dreary nursing home and a treatment centered on powerful antipsychotics to combat the onset of memory loss, dementia and other signs of a mind that is slowly unraveling.

But now, some scientists say the best way to treat Alzheimer's is with a broader approach - one that emphasizes regular exercise and a healthy environment. Even encouraging participation in an activity as simple as gardening, one researcher noted, can reduce depression and ease anxiety in some Alzheimer's patients.

The findings were detailed in two studies released last month.

One, published in the Oct. 15 issue of *The Journal of the American Medical Association*, looked at 153 Alzheimer's patients living in the Seattle area over several years. Some of the patients, whose symptoms of the disease varied in their severity, were randomly assigned to an exercise program that focused on strength, balance and flexibility training.

For about 30 minutes a day, the patients went for walks, stretched or used light hand weights for quick exercises that they could do at home. The people providing care, usually a spouse or son or daughter, were also taught a number of techniques to encourage and help with the exercise program and to make better responses to behavioral problems.

Compared with a control group that received "routine" care, the patients who exercised were in better physical shape and had lower rates of depression.

When they followed up two years later, the researchers discovered that the improvements had not dissipated; patients in the exercise group were still physically active, had more pleasant interactions with people caring for them and were less depressed.

Unlike subjects in the control group, patients who worked out regularly also showed fewer signs of physical frailty, which made them less prone to falls, fractures and hospitalization, said Dr. Linda Ten, a professor of psychosocial and community health at the University of Washington and a lead author of the study.

"These patients were much better off both physically and emotionally," Dr. Ten said. "They spent less time in bed and more time being active. The intervention really changed their day-to-day functions and improved their mood. Over all, they were happier."

On the other side of the country, a group of researchers, led by Dr. John Zeisel, studied how a patient's environment could influence symptoms of the disease.

In a study published in the October issue of *The Gerontologist*, Dr. Zeisel and his colleagues looked at 427 patients living in 15 randomly selected nursing homes or assisted living residences throughout New England. They found a relationship between behavioral and emotional health and certain aspects of the patients' surroundings, like whether they could decorate their rooms with personal furniture and pictures and had access to an outdoor area or garden where they could walk and sit for hours at a time.

The more cozy or homelike the environment seemed, as opposed to the traditional hospital unit with white walls and anonymous nurses, Dr. Zeisel said, the better the patients did on standard measures of depression, aggression, social withdrawal and depression.



Nancy Weinfeld, center, executive director of the Hearthstone Alzheimer Care center in White Plains, and residents there work with flowers as an activity to ease patient anxiety.

"Things like privacy, personalized bedrooms, and common areas where residents could socialize were all associated with fewer psychotic symptoms and aggressive behaviors," said Dr. Zeisel, who has written several books on housing for the elderly and runs the Hearthstone Alzheimer Care residence based in Lexington, Mass. "I think when the residents are in an environment they can understand, it places less cognitive stress on them. And so they experience less anxiety or social withdrawal."

In an age where people tend to define treatment for psychological conditions solely as prescription drug use, Dr. Zeisel said, the two studies together suggest that the benefits

### Activities and changes in patient's surroundings influence their health.

of a nonpharmacological approach should not be overlooked so quickly.

Instead, Dr. Zeisel says, the best success in treating Alzheimer's may come from using a nonpharmacological approach in combination with drugs, but not from either one alone.

At the very least, say some scientists, the new findings lend support to the notion that patients need as much physical and social stimulation as any other person.

Although that seems obvious, they say, past research has shown that for years it was not unusual for many Alzheimer's patients to be warehoused in institutions.

"There was a time not too long ago when patients were left in chairs and ignored, which is the worst kind of prison," said Dr. Barry Reisberg, clinical director of the Silberstein Aging and Dementia Research Center at New York University. "There are certain basics of care that, tragically, for Alzheimer's patients are not always applied."

Dr. Reisberg and his colleagues at N.Y.U. have defined 16

stages of decline in the disease and say they correspond, inversely, to normal human development beginning in early childhood. The first stage of the scale, for example, corresponds to normal adults. But in later stages, the patients increasingly lose the ability to take care of themselves.

At the end of the scale, the patients cannot sit up, speak or walk, as if they have, regressed to infancy.

Just as in normal human development, however, the right stimulation can ward off certain behavioral problems.

"A child that is poorly brought up will become aggressive and progress to other behaviors," Dr. Reisberg said. "But if you nurture them and get them involved in the right activities they can turn out well. We see the same thing in Alzheimer's. Just with minimal intervention, you can get strong effects."

For Dr. Zeisel, that intervention can be as simple as encouraging patients to pick up hobbies that they enjoy, like baking or planting vegetables in a garden.

"People don't often think about it, but decreasing dependence leads to the residents' feeling good about themselves. As a result, you naturally see a decrease in depression," he said.

Though the new findings highlight a way to improve the quality of life for people living with Alzheimer's, some scientists caution that there is still no evidence to suggest that exercise and a change in environment can slow the actual progression of the disease;

Some patients, said Dr. Marilyn Albert, who directs the division of cognitive neuroscience at Johns Hopkins, never develop problems with agitation and aggression at all.

Still others, including those who are severely psychologically disturbed, she says, respond much better to changes in environment than they ever would to drugs.

"The message here for caregivers and families of people with the disease is that environment and exercise are pretty big factors," Dr. Albert said. "What these studies have done is to quantify and demonstrate scientifically a range of things that people have had success with anecdotally."

"But now what we need to do is translate this to a level where you can teach people to apply this to a normal everyday situation, which is difficult to do."