

# DIMENSIONS

UNIVERSITY OF WASHINGTON ALZHEIMER'S DISEASE RESEARCH CENTER ■ SUMMER 2007

## 22nd Annual University of Washington ADRC Public Forum

By Dana Martin



Pictured: Dr. David Buchner (center),  
Dr. Linda Teri (left), and  
Dr. Rebecca Logsdon (right)

We've all heard that exercise is good for us — right up there with the adage of eating an apple a day for the preservation of health. But can exercise really make a person smarter? And does exercise actually help prevent Alzheimer's disease and even help those who have been diagnosed with the disease?

The relationship between exercise, physical health and cognitive function was the focus of the 22nd Annual Alzheimer's Disease Research Center (ADRC) Public Forum, held June 13 at North Seattle Community College.

Dr. Linda Teri, UW ADRC Education Director and Professor of Psychosocial & Community Health, kicked off the evening with an overview of the ADRC. "We try to cover the waterfront in understanding the disease process," said Teri. The Center's mission is to conduct cutting-edge research, to help provide care, and to educate the public, including those caring for people with Alzheimer's.

Dr. David Buchner, chief of the Physical Activity and Health Branch at the Centers for Disease Control and Prevention, was this year's featured speaker. He began his presentation, "Surprising Links Between Physical Activity, Brain Health, and Healthy Aging," by describing a 2001 study that enrolled almost 6,000 women over the age of 65. A test that measures memory and cognitive function was administered to each woman when she enrolled and repeated six to eight years later to measure how much cognitive function changed. The amount of physical activity was also measured by asking each woman how many blocks she walked in a week. The investigators found that more walking at baseline was significantly associated with less cognitive decline six to eight years later. In fact, women in the highest physical activity group had 34 percent less cognitive decline compared with the least-active women.

Although vigorous activity is good, the benefits of moderate activity are enormous and are less likely to lead to injury in older adults, noted Buchner. A simple test to determine your level of activity is that if you can sing while you're walking, your exercise is light. If you can talk but not sing, it's moderate. And if you're gasping for air, you are doing vigorous activity.

"A surprising finding is that if you exercise moderately for three 10-minute intervals throughout the day, you get the same benefit as if you exercise for 30 minutes in a row," Buchner said. That means instead of trying to pack all your physical activity into one session, you can break it up over the day, which makes it easier to work it into your daily routine. For example, you can reach your physical activity goal by taking a brisk 10-minute walk in the morning, spending 10 minutes raking or digging in the garden, and then

*Dr. Buchner said this study and many others on physical activity and its association with physical, mental and cognitive health all contributed to the CDC's current recommendations for physical activity in adults: At least 30 minutes a day of moderate physical activity at least five days a week or at least 20 minutes a day of vigorous physical activity at least three days a week.*

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lifting weights for 10 minutes while watching the evening news.

Research consistently points to the power of exercise to promote physical and mental health. Buchner cited a study with older adults in which walking two or more miles a day reduced mortality by more than 50 percent. "Do you know of anything else you can do that's that easy and can reduce your rate of premature mortality by 50 percent? You're not going to get a drug from your doctor, I don't think, that's going to reduce your rate of mortality by that much," Buchner said.

As for the effects of exercise on memory and thinking, Buchner focused on whether physical activity improves cognitive ability in adults, whether it prevents cognitive decline in individuals at risk for dementia, and whether it improves function in those who already have cognitive impairment. A recent meta-analysis that included data from 18 high-quality research studies showed that, in adults, exercise has the greatest effect on skills like complex problem-solving and reasoning ability. Benefits were greatest in studies that included aerobic, strength and flexibility

**CURRENT PHYSICAL ACTIVITY GUIDELINES**

At least 30 minutes a day of moderate physical activity at least five days a week.

-- or --

At least 20 minutes a day of vigorous physical activity at least three days a week.

training — many women benefited more than men from exercise.

As far as preventing or delaying cognitive decline in older adults, a recent study conducted in Seattle by Dr. Eric Larson and colleagues found that habitual walkers had a 40 percent decreased risk of developing dementia compared to non-exercisers. Furthermore, adults who were less healthy and who had poorer physical function seemed to benefit the most. Dr. Buchner identified several possible underlying causes for this outcome, including increased blood flow to the brain, increased brain volume and reductions in metabolic inflammatory markers. "So we have now this list of possible mechanisms. There are about 10 to 15 studies about [exercise and] Alzheimer's disease prevention, and most of the literature is positive," Buchner said.

For those who already have Alzheimer's disease or other dementias, exercise also appears to confer many benefits. For example, in 2006, Dr. Teri published results

**Q:** What percent of Americans in 2000 reported a healthy lifestyle in that they: 1. Did not smoke; 2. Got regular physical activity of at least 30 minutes five or more times a week ; 3. Ate five or more fruits and vegetables a day; and 4. Had a healthy body weight (BMI 18.5–25.0)?

**A:** 3 percent

*"We have a chronic disease epidemic in this country, and mainly what's driving it is our lifestyles." D. Buchner*

of a randomized controlled trial involving 153 community-living Alzheimer's patients who received either an in-home exercise and caregiver education program or routine medical care. Participants who received the exercise and education program had better physical function, decreased depression and were less often placed in an institution due to behavioral disturbance than those who received routine care. In addition, a recent meta-analysis of physical activity and dementia showed that a variety of physical activity programs were consistently associated with a 30 to 50 percent reduction in adverse cognitive, behavioral and affective outcomes in individuals with dementia.

What specific changes occur in the brain that may be producing these exercise-related effects on cognition? Dr. Buchner cited a 2004 study that used functional magnetic resonance imaging (fMRI) to study brain activity in adults when performing a cognitive task. The fMRIs showed that subjects who were aerobically trained had enhanced brain function compared with non-exercis-



At the Forum from left to right: Joanne McMahon - Alzheimer's Association; Amy Moore & June vanLeynseele - NW Research Group on Aging; Nancy Brown & Manard Stuart - UW Alzheimer's Disease Research Center. Not shown: Reed Henry - Alzheimer's Society of Washington.

ers. These findings are consistent with laboratory studies which have shown that exercise-trained rats solve mazes faster than sedentary rats and that exercise-trained rats actually grew new neurons in an area of the brain called the dentate gyrus of the hippocampus (an area affected by Alzheimer's disease in humans). Research has also shown that exercise has beneficial effects on brain neurotransmitters such as dopamine, serotonin and acetylcholine. Several Alzheimer's disease drugs (such as donepezil, rivastigmine, and galantamine) increase brain acetylcholine levels. Research shows that exercise might have the same effect.

Dr. Buchner concluded that the old tried-and-true recommendation for us to all take a walk every day has been proven to have tremendous health benefits, both physical and mental. "In my humble opinion, the evidence is not conclusive, but probably physical activity, especially aerobic physical activity, has a moderate effect on cognition in healthy and cognitively impaired adults, and it prevents or delays the development of cognitive impairment, including impairment caused by Alzheimer's disease." He added that although much remains to be learned, "We already have more than enough reasons to be physically active. And it looks like to me we're going to have another big reason as this research goes forward." ♦

To view Dr. Buchner's presentation, go to: <http://depts.washington.edu/adrcweb/forum2007.shtml>

## For the Family Caregiver When Words Fail ... Visiting A Loved One in the Nursing Home

Mary Guerriero Austrom, Ph.D.

One of the most difficult things for family caregivers of Alzheimer disease (AD) patients to do is place their loved one in a nursing home. This event is often described by family members as the single most difficult decision they have to make. Family members often feel that they have let the patient down by breaking a promise not to institutionalize them; are concerned that the nursing home will not provide quality care; or will not be able to meet their loved one's emotional needs. However, AD can be such a long disease that nursing home placement cannot be avoided in most cases. At some point, the patient's needs are greater than most family members are able to provide without professional help, therefore nursing home placement is necessary for the family caregiver's own physical and emotional health. Remember that you are the most important person in your loved one's life. By staying involved in his or her care even in the nursing home, you can help the staff provide the best care possible.

As the disease progresses, visits to the nursing home can become

particularly difficult for some family members. This tends to happen when the patient's verbal skills have diminished to the point where communication is extremely limited or nonexistent. Caregivers experience many emotions as they watch their loved one fade before their eyes. It is therefore understandable how painful nursing home visits can be.

However, we cannot be sure just how much the patient understands or feels at an emotional level once words fail. We have seen patients become visibly calmer and less



agitated when the staff tell them that a loved one is coming to visit. While the patient cannot tell you their loved one's name and will probably not recognize

them when they get there, there is still something soothing, calming and familiar about that name, which makes them feel better.

We believe that the patient is still able to connect to some of their past at an emotional level. Therefore, we always recommend that family members continue their visits to the nursing home even though visiting is emotionally draining.

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Following are some suggestions which may help to make your visits more meaningful:

- ♥ Visit for shorter periods of time. You do not have to stay as long as you used to but do not give up visiting altogether.
- ♥ Celebrate the special occasions in their life. Happy Birthday gets smiles from even very ill patients.
- ♥ Hold the patient's hand and reminisce about the past and special occasions. You will have to do the talking so remember to use a calm, soothing voice and tell them stories from your memory about them.
- ♥ Do not wait for or expect a response. Continue talking or reading to them.
- ♥ If there are grandchildren or great grandchildren living nearby take them with you for a short visit. Nothing livens up a nursing home and fills it with laughter faster than a baby or a toddler. Take one child with you at a time. Too many people can be overwhelming.
- ♥ Have a tape player in the room and put on some of the patient's favorite music from the past and listen to it together.
- ♥ Pray or read scriptures to the patient; this is usually very calming.
- ♥ Remember to watch for nonverbal cues from the patient:

~If the patient shows signs of agitation or distress, stop what

you are doing. Get help and try to figure out what is upsetting them. Do not repeat any activity which distresses them.

~If they get teary, it may mean they are very happy or sad. An AD patient has much to be sad about so it is OK to let them cry. Offer them a tissue or dry their tears.

~If they begin to relax or smile, continue the activity and remember to repeat it at your next visit.

♥ Try to have a routine to your visits:

~If you visit every day, come at the same time daily.

~If you visit once a week or a couple of times a month, try to come on the same day and at the same time.

~Don't let others dictate how often or how long your visits should be. You alone know your own capabilities and limitations. Be good to yourself! You can't help your loved one if you become ill.

♥ Stay involved or get involved with your loved one's care planning. You and the staff can learn from each other and work together to provide the best care possible.

♥ Remember you are still the most important person in your loved one's life. They want to see you and appreciate your visits even if they cannot tell you.

*Reprinted with permission from the Indiana University Alzheimer's Disease Center; Spring 2006 Newsletter.*

## Local Study to Test Omega-3 Fatty Acid on Alzheimer's Disease

Could a nutrient found in fish, algae, and human breast milk help slow Alzheimer's disease? Growing scientific evidence shows that omega-3 fatty acids play an important role in cardiovascular and eye health and may also have a role in reducing the risk of Alzheimer's disease.

In recent European studies and the Framingham Heart Study, scientists reported that people with the highest blood levels of the omega-3 fatty acid called docosahexaenoic acid, or DHA, were about half as likely to develop dementia as those with lower levels. Observational studies have suggested that DHA may protect against Alzheimer's disease. A controlled clinical trial is needed to test this idea.

Following on these findings, the Alzheimer's Disease Cooperative Study (ADCS) will conduct a nationwide clinical trial starting in early 2007 to test whether DHA, the key part of fish oil that protects the brain, may slow the progression of dementia in people with Alzheimer's disease. The DHA study will be conducted locally at University of Washington's Alzheimer's Disease Research Center located at the VA Puget Sound Health Care System; Elaine R. Peskind, M.D. is the Site Principal Investigator. The ADCS is a nationwide consortium of research sites funded by the National Institute on Aging (NIA) and coordinated by the University of California, San Diego.

"There is enough scientific evidence now to support a full-scale clinical trial to determine if DHA slows the progression of Alzheimer's disease," said Joseph Quinn, M.D., National Principal Investigator for the DHA study. "We are hopeful that the study results will also help us to understand the mechanism of action of DHA."

## CURRENT CLINICAL TRIALS

DHA is one of several omega-3 polyunsaturated fatty acids found in fatty fish such as salmon and mackerel. It is also sold in fish oil and DHA supplements available over the counter. In the Framingham study in particular researchers looked for whether there was a reduced risk linked with seven other omega-3 fatty acids, but found that only DHA had any effect upon dementia.

The study will use a pure form of DHA made from algae that has no fish-related contaminants. Martek Biosciences Corporation, which developed and patented two types of microalgae rich in DHA, is providing the pure DHA for this study. The clinical trial will offer participants the opportunity to be clinically monitored by researchers while taking one of the purest forms of DHA available. Because the FDA does not regulate over-the-counter supplements such as DHA, the type consumers can buy in health food stores often varies widely in uniformity.

Some 50 sites around the country will enroll a total of 400 volunteers age 50 or older with mild to moderate Alzheimer's disease for this 18-month trial. More than half (60 percent) of the participants will be randomly assigned to the active treatment group and 40 percent to the placebo (inactive pill) group. All participants will be closely monitored and assessed regularly by doctors and nurses at the research clinic over the course of the study.

*For more information, contact the UW ADRC at 1-800-317-5382.*

*For information on sites in other cities call the Alzheimer's Disease Education and Referral Center at 1-800-438-4380 or check their website at [www.nia.nih.gov/alzheimers/](http://www.nia.nih.gov/alzheimers/)*

### Genetic Studies of Dementia

The Genetics Program of the Alzheimer's Disease Research Center at the University of Washington and the VA Puget Sound Health Care System is studying the role of genetics in dementia. It seeks to identify the genes responsible for various forms of dementia. Families are being sought with two or more living affected individuals. Participation could involve an interview, examination, review of medical records and a blood sample.

*For further information, please contact Ellen Steinbart, R.N. at 206-764-2112 or toll free 1-800-745-4511.*

### A Study to Evaluate the Feasibility of a 16 ft. Route Test, a Test of Spatial Memory, in Healthy Elderly & Patients with Mild to Moderate Alzheimer's Disease

We are currently enrolling eligible participants in a study that will examine how well a set of thinking tests compare with each other. In particular, we are looking at a test of spatial memory, which refers to your ability to remember where things are located. Eligible participants include males and females aged 65 to 85 years old, healthy individuals with no memory difficulties, and individuals with a diagnosis of mild to moderate Alzheimer's disease. The study involves coming to the Seattle VA for two short visits about 1 to 1.5 hours long. During visits participants will perform a short walking route test and fill out a questionnaire asking about memory in everyday life.

*Please contact Marisa Johnson at 206-277-1058 or e-mail at [marisaj@u.washington.edu](mailto:marisaj@u.washington.edu) if interested or to find out more information.*

### Alzheimer Society of Washington Presents: 21st ANNUAL FALL CONFERENCE "Unmasking Dementia Care Issues"

**FRIDAY, OCTOBER 19, 2007 - 8:00 A.M. TO 4:30 P.M.**

Christ the King Conference Center,  
4173 Meridian St, Bellingham, WA

#### **Speakers:**

Thomas D. Bird, M.D. – Focus on Genetics  
Laura Beck – Eden At Home & Green House Project  
Yolanda Sanchez-Lovato – Special Care Issues  
Judith-Kate Friedman – Using Music  
Kristoffer Rhoads, Ph.D. – Vascular Issues & Dementia  
Paul Spinelli – Plan Ahead for End of Life Options

*For information and registration,  
please call 360-671-3316 or 1-800-493-3959.*

## Meet Thom Walton

Thom Walton is a research coordinator for the Northwest Research Group on Aging (NWRGA) – part of the University of Washington School of Nursing’s Department of Psychosocial & Community Health. Thom has worked with the NWRGA for 1.5 years, interviewing older adults with dementia and their caregivers. Previously, as an interviewer for the Department of Epidemiology, he traveled throughout the U.S. coordinating and administering questionnaires for high school and junior high students to examine the relationship of adolescent depression and conduct disorders. In another UW position, this time for the School of Social Work, he was a research coordinator for another study that examined adolescent mental health issues. He received a bachelors degree in sociology from the University of Texas at Austin, where he nurtured his interest in the discipline of methodology, which he employs regularly in his current position. Of his choice of profession, he says: “I had a longtime interest in psychology and methodology and I always knew that I wanted to do work that improves people’s lives.”

Thom’s typical day at the NWRGA is split between travel and study coordination. On average he administers between one to three

in-home interviews per workday anywhere in Western Washington – usually three visits over six months with any one subject. Back in the office, he works behind the scenes doing phone recruitment, interview scheduling and activity monitor management.

One specialized and crucial duty is the management of activity monitors (Actigraphs) for the AFH (Adult Family Home) study, which is looking at a method to improve sleep in dementia patients living in AFHs. Participants wear these devices continuously for one week and afterward Thom downloads, manages, and interprets the recorded data of sleep patterns for investigator analysis. The Actigraphs give a clear picture at

how subjects are sleeping and how interventions testing light therapy, walking therapy and/or education therapy affect the quality of sleep.

Actigraphs are also used in another study – NiteAd – which is investigating different methods to improve length and quality of sleep for both dementia patients but also his or her caregivers.

Thom is excited that a new NIH study –RALLI – is now beginning implementation. This study will take the sleep studies a step fur-



ther by employing a new device called an Atical which records participants’ activity levels including caloric expenditure.

Thom says that what he enjoys most about his position is that he has the opportunity to travel throughout Western Washington meeting lots of interesting people, being invited into their homes, and feeling like the work he does can make a difference for those struggling with the effects of Alzheimer’s and other forms of dementia.

He sees much promise in the development of effective behavioral interventions that are cost-effective and have fewer complications than pharmaceutical interventions.

During his free time, Thom’s interests include gardening, camping, travel, arts and crafts, and enjoying live music.

In closing Thom would like to say to study participants “... how much I appreciate their volunteering and participation, and how they willingly invite me into their homes in order to further this meaningful and important research.” ♦

**“What I appreciate most is that our group’s bottom line is improving quality of life – that is our ultimate goal.”**

## Traveling with Alzheimer's

**Question:** *I'm considering taking my 76-year old father who has early-stage Alzheimer's to visit relatives in a nearby state. I can see benefits and drawbacks to both driving and flying. Would you offer suggestions for making the trip go as smoothly as possible?*

**Answer:** Having AD does not mean that it's necessary to stop traveling. With careful planning and preparation you can make trips with your loved one a rewarding experience. Tell your father where you are going and when you are leaving. This will allow him to ask you questions. It is also a good time for you to calm his fears.

If you decide to fly, enlisting the services of a good travel agent can be invaluable – don't be shy about letting him/her know that your father has AD. Handle all flight details in advance so you can truly focus on your father to help create pleasant moments during the trip. Avoid traveling during times of day when your father may become more agitated or tired – many dementia patients become restless and sensitive in the late afternoon. If you must change planes, avoid tight connections. Ask the agent to reserve seats close to the exit so you can be the first ones off. Even if walking is not difficult for your father, consider requesting a wheelchair so that an airport employee is assigned to help you get from place to place in the airport. Ask your agent about contacting the airlines directly to request special assistance (most airlines require at least 48 hours advance notice).

On the day of the flight, call or check online to confirm that your flight is on schedule. Enlisting a friend or family member to drive and drop you off can help conserve your energy. Avoid overstimulation and allow plenty of time for transitions.

If your father feels that you are anxious, he may follow suit. Check in early and let airport personnel know that your father has AD. Requests to remove shoes, relinquish bags, etc. at security checkpoints can be upsetting; keep things as light-hearted as possible. While waiting to board, point out things he might enjoy – artwork, colorful shop windows, children playing. Carry healthy snacks and water as well as his medications, a change of clothes and simple activities. A CD or tape player with favorite music may help him relax during take-off and landing. A photo album can also help take his mind off his surroundings – include pictures of the family members you are visiting as this can give him a sense of anticipation and familiarity with those meeting you at the other end.

If traveling by car seems to be a reasonable option (if your father can remain content and relatively quiet for extended periods of time), you may feel more in control of the situation, since you can stop for rests or meals and be more flexible with your time. Avoid crowded attractions or extremely busy restaurants. Bring a familiar pillow and blanket from home – encourage naps. Do what you can to prevent your father from feeling uncomfortably hot or cold. Don't forget the hat, sunscreen and water

bottle! Make the trip fun – point out interesting sights along the way.

At the hotel place your father's belongings where he can easily see them. Call ahead and ask for a quiet room. Consider bringing a familiar object he can place on his bedside table. Have a cup of tea or coffee and a bowl of cereal in your room in the morning if that is what you normally do at home.

Whichever mode of travel you choose, make sure to allow plenty of time for rest before the trip – for both you and your father. Consult his health care provider for suggestions. You may consider enlisting another traveler – a family member or close friend to share the driving. Keep your dad within sight at all times to prevent wandering. Make sure to have your father's identification and contact information on his person – make photocopies of important papers (for example: his ID and health coverage info) for his wallet.

If you are traveling for a special event such as a wedding or birthday, allow a few days to settle in beforehand. Gather supporters who are happy to share the responsibility of caring for your loved one during the event. Ask for help from family and friends. Make your goal to have fun, relax and enjoy the details of your trip with your father. Take pictures to remember the trip when you get home. The memories may be only yours to keep forever, but don't feel bad or let this deter you as it is a blessing to see your father having fun in the moment! Bon voyage! ♦

**Tip:** Changes to environment can trigger wandering behavior. Enroll with the Alzheimer's Association Safe Return® program by calling 1.888.572.8566. Those already enrolled should notify Safe Return of travel plans.

# DIMENSIONS

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### The University of Washington ADRC Program Support Fund

To make a donation or for information please contact:

Victoria Hoyt, ADRC Program Coordinator at 206-764-2749  
or toll-free at 1-800-329-8387, Ext. 6-2749.

Email: [victoria.hoyt@va.gov](mailto:victoria.hoyt@va.gov)

Checks should be made out to ADRC and addressed to:

VAPSHCS (S-116-MIRECC) - Attn: Viki Hoyt  
1660 S. Columbian Way, Seattle, WA 98108

If next of kin notification is requested, simply provide that contact information.



Seeking  
Submissions!

## Let Experience Speak

*Let Experience Speak* is a new column designed to give you, the caregiver, the opportunity to share helpful ideas, tips and hints that may enrich another's caregiving experience.

*Have you:*

- Discovered a new way of doing the same old thing that has made a difference in the quality of life for you or the one you care for?
- Received advice that could be helpful if shared with another?
- Found a way to head off a particular pitfall or difficult or dangerous situation?
- Learned ways to create moments of happiness for your loved one or patient?
- Hints on strategies to deal with stress?

Submissions should be 300-500 words and focus on day-to-day activities experienced as a caregiver of someone diagnosed with dementia. Send submissions to: Dimensions - University of Washington, Box 358733, Seattle, WA 98195 or by e-mail to [adrcweb@u.washington.edu](mailto:adrcweb@u.washington.edu)

Please include an e-mail address or phone number in any correspondence.