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Battling CAREGIVER STRESS

Helpful tips to help you help yourself

APHASIA

How to handle this debilitating condition

Pat Bowlen

The Denver Broncos owner and now his wife are living with Alzheimer's



PLUS THE
LATEST NEWS ON
Alzheimer's research
and treatment

Fisher Center invites you to purchase our new book about Alzheimer's



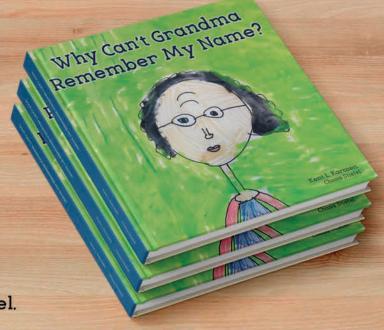
Why Can't Grandma Remember My Name?

A book explaining Alzheimer's disease using artwork created by children juxtaposed with art created by Alzheimer's patients, demonstrating the power of therapeutic art for all ages.

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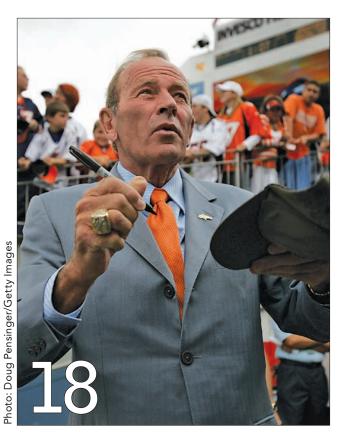
Foundation's President, Kent L.

Karosen, and co-author Chana Stiefel.



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www.ALZinfo.org/book



Pat Bowlen

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Pat Bowlen 18

Not even Alzheimer's disease can dent the positive impact Pat and Annabel Bowlen have had on the NFL, the Denver community and the State of Colorado.

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A common condition among people with Alzheimer's, aphasia can be a challenge to deal with.

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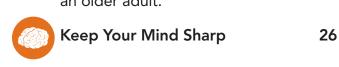
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	We find out how and when to



preserving your



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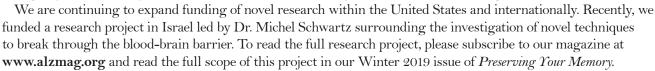
Cooler Times Are Here!

As we settle into the fall season, we hope that this issue of *Preserving Your Memory* provides some comfort during the cooler months.

In this month's cover story, you will read about how Alzheimer's disease affected Denver Broncos' owner Pat Bowlen's family not once, but twice. Pat Bowlen not only holds many titles in the sports arena, he is also a huge philanthropist who is identified as one of the largest donors in the Denver area. To learn more about how Alzheimer's affected him, his wife and his entire family, read the full article on page 18.

On the research front, our researchers at the Fisher Alzheimer's Disease and Education and Resources program at New York University Langone Center, led by Dr. Barry

Kent L. Karosen Reisberg, have discovered that combining Memantine, an Alzheimer's drug, with a specific care management program reduced the need for anti-anxiety medication by 100%, hospitalization by 67%, and emergency room visits by 50%. To learn more about this study read the full article on page 14.



For our caregivers, we know how much caring for your loved one means to you and how stressful caregiving can sometimes be. We wanted to share some information with you on page 10 about how to manage stress as a caregiver. Please take a moment to read the article for some tips and ways to find support. Remember, you are no good to your loved one if you don't first take care of yourself.

During this season of giving and sharing time with family and friends during the holidays, we want to remind you that November is Alzheimer's Awareness month. Help us celebrate the season of giving by reading our article about The Power of Giving on page 12 and find out how you can support our Save the Neurons Campaign this #GivingTuesday, November 27th.

Wishing you and your family a joyous holiday season and a Happy New Year!

Sincerely,

Kent L. Karosen President & CEO

Please send your tips, stories or questions to:

Fisher Center for Alzheimer's Research Foundation 110 East 42nd Street, 16th Floor New York, NY 10017

or by e-mail to info@ALZinfo.org

Together we can end Alzheimer's!

About the Fisher Center for Alzheimer's Research Foundation

Since 1995, the Fisher Center Foundation, a 501(c)(3) nonprofit organization, has been providing hope and help to the public by funding research into the cause, care, and cure of Alzheimer's disease and creating much needed educational programs. We are one of the world's largest research teams leading the battle against Alzheimer's disease. Our team of internationally renowned scientists, under the direction of Nobel Laureate Dr. Paul Greengard, has been at the forefront of research that has provided a conceptual framework for modern-day investigations into Alzheimer's disease. The Fisher Center Foundation has earned Charity Navigator's highest 4-Star rating seven years in a row for fiscal management and commitment to accountability and transparency. For more information or to make a donation, go to www.ALZinfo.org.

The LATEST NEWS on Alzheimer's Disease and Brain Health

Eat Fish, Fruit, Vegetables and Nuts for Brain Health

Older men and women who eat a healthy diet tend to have larger brains, which may help to protect against dementia. Those are the findings of a new study from the Netherlands that found that a diet rich in vegetables, fruit, whole grains, nuts, dairy and fish and low in sugary beverages was associated with larger brain volumes.

For the study, researchers looked at the diets of 4,213 older men and women, average age 66, who were free of dementia. Diets were ranked on a scale of zero to 14, with the healthiest diets containing larger amounts of vegetables, fruits, nuts, whole grains, dairy and fish, and few or no sugary drinks.

Those who consumed a healthier diet had an average of 2 milliliters more total brain volume than those who did not. To compare, having a brain volume that is 3.6 milliliters smaller is equivalent to about one year of aging. The findings appeared in *Neurology*, the medical journal from the American Academy of Neurology.

The findings add to a growing body of evidence that what you eat may help to delay the onset of



Alzheimer's disease and other forms of dementia. As we age, the brain shrinks, and we lose brain cells critical for memory. Having more of those cells may help to protect cognitive health should some of them die off because of Alzheimer's disease.

Two Hours a Week of Exercise Can Boost Brain Health

Exercising for at least 52 hours over a six-month period—for an average of about two hours a week—can lead to improved thinking skills in older men and women, including those who already have dementia, a new analysis found. The exercise need not be intense and can include some combination of mild aerobics (like walking), strength training, or mind-body exercises (like yoga or tai chi).

The analysis, published in *Neurology*, included a total of more than 11,000 participants whose average age was 73. Of those, 59 percent had normal memory and thinking skills. Another 15 percent had Alzheimer's disease or other forms of dementia. And 26 percent had mild cognitive impairment, a type of malfunctioning of the brain that half the time leads to full-blown Alzheimer's disease.

The researchers found that exercise led to benefits both in those who were cognitively healthy and in



those with dementia or mild cognitive impairment. In contrast, people who exercised for an average of 34 hours or fewer over the same time period did not show any improvement in their thinking skills.



Combine Exercise With Brain Games

Regular exercise has been shown to reduce the risk for Alzheimer's disease and other forms of dementia later in life. And playing mentally challenging games, including doing crossword puzzles, may have similar benefits, studies suggest.

Now a new study has found that combining the two—exercise and games—may provide an added boost for the brain.

The study, in the journal *Frontiers in Aging Neuroscience*, found that older men and women who had memory problems showed improvements in various complex thinking and memory skills when they combined exercise with mentally stimulating games.

For the study, the researchers enlisted older men and women with mild cognitive impairment whose average age was 78. Some pedaled on stationary bikes while navigating along a scenic virtual reality bike path or a similarly challenging task for 30 to 60 minutes several times a week. Others rode a traditional stationary bike with no gaming component.

At the end of the six months, participants who pedaled while undertaking a mental task performed significantly better in tests of executive function, including their ability to multi-task and make decisions, compared to those who didn't engage in exercise with a mental challenge.



Alzheimer's Disease Increases the Risk of Falls

Falls are common in older men and women and can lead to prolonged hospital stays and serious medical complications. Falls are a particular problem in those with Alzheimer's disease, according to a new report in the *Journal of the American Geriatrics Society*.

Reviewing studies of falls and older adults, the researchers note that one in three Americans aged 65 and older experience a fall each year. The rate is more than doubled in those with Alzheimer's disease: 70 percent of those with dementia experience at least one fall each year. Those with mild cognitive impairment are also more likely to have a fall, the researchers found.

The authors suggest that several measures may help to prevent falls in older people, including those with Alzheimer's disease. Among them:

- Keep a list of all of the medications you take. Many drugs can lead to drowsiness and other side effects that can diminish attention and increase the risk of falls.
- Fall-proof your home. Remove any stacks of papers, loose carpets, extension cords or dropped clothing items that may be on the floor. Put the lights on at night.
- Consider strength and balance exercises. Regular exercise and physical activity, even if it is light, can help to maintain muscle strength and balance and may minimize the risk of falls.



For more information: Visit www.ALZinfo.org often for up-to-date and expert-reviewed scientific news.

More Beautiful

By Carrie Knowles

Last Childhood, and my family's experiences with Alzheimer's. I look out over the crowd and make a mental note of how many men have come. It's an unconscious thing I do each time I speak. I don't need research to tell me that women are the primary caregivers. The room is usually filled with daughters, daughters—in—law and wives. The sisters always sit together, their heads touching at times, nodding, comparing notes. They invariably raise their hands and ask what they are to do about the brother or the other sister who refuses to accept what is happening or help them take responsibility. The wives ask questions about drugs and miracle cures they've heard of.

I notice a woman in the third row. She is distracted and fidgeting. She is wearing a beautiful silk skirt that she is pleating with her fingers. She folds the material in her hands then lets it go. Folds it, then lets it go: over and over again. Sometimes when she lets it go, she stops for a minute and picks lint from the sleeve of her sweater. I try to make eye contact but fail. I am not a doctor, but I have learned to recognize the twitchy obsessive—compulsive behaviors you see so often in Alzheimer's patients.

I don't usually get individuals living with Alzheimer's in the audience.

There is an elegant man in a wheelchair sitting next to her. He has the most beautiful face. It is nut brown and smooth, with deep lines at his eyes and mouth. His face is a map of a lifetime of living and caring. He smiles at me and nods his head. He knows what I've seen.

He raises his hand. I can tell by the way that he moves his body that he might have had a stroke. It takes him a moment or two to speak. His words come slowly. I make eye contact with him so he will know I am listening and have all the time in the world to hear what he has to say.

"What," he says, making a slight nod to his wife, "can one do, once you know for sure, to make the lives of these people more beautiful?"

I have never been asked this question before. I search my mind for an answer and decide to talk about Hemingway's short story: "A Clean, Well Lighted Place."



Carrie Knowles

There is an old man in the story. He is deaf and alone. Each night he comes to sit in the restaurant to drink. In the daytime the street is dusty, but at night the dew settles the dust, and he can feel the difference and the quiet.

There are two waiters in the restaurant. One is young and married. The other is older and has no family. The young waiter is impatient to go home to his wife. He doesn't understand why the old man can't drink at home and why he has to come every night and to sit alone drinking until past closing time.

When the old man asks for another drink, the younger waiter refuses. The old man stands up with



dignity and pays his bill. He leaves a tip and walks down the street alone. The older waiter argues with the younger man, and, as he does, it becomes clear to the older man that drinking alone at home is not the same as being able to come to a clean, well-lighted place to drink.

More beautiful. I tell the man who asked the question that when we care for someone with Alzheimer's, we bear the responsibility of finding the "clean, well-lighted place" so they can enjoy what the light at the end of the day has to offer.

As I drive home, his question forces me to think about what pleasure and happiness there is left in life when there is no memory. Because, as every caregiver knows, with each memory that slips away, despite our best efforts, we become more and more disconnected from the person we love.

When memory is gone, there are other ways to connect with those we love: through our senses of hearing, sight, touch, taste and smell. In our scramble to try to make things better, to "fix" what's wrong with Alzheimer's, it is all too easy to forget about the things Alzheimer's has not destroyed.

What can we do to make the lives of those we love more beautiful? We can touch. We can hold hands and hug. We can kiss and caress. We can comb hair and massage tired hands and feet with soothing lavender lotion. We can make sure the clothes we dress them in look good, fit well and are soft. We can play their favorite music for them and feed them all the foods they love, be they mashed potatoes, chocolate ice cream or that crazy green bean casserole they always made for Thanksgiving.

And, if they never liked Brussels sprouts, then, I say, they never have to eat Brussels sprouts again.

Award-winning author, Carrie Knowles, wrote The Last Childhood to help caregivers and health care professionals understand the impact of Alzheimer's on the whole family. Carrie is available to speak at Alzheimer's events. She recently started a closed Facebook page for Alzheimer's caregivers at www.facebook.com/groups/TheLastChildhood. She has four other books and writes a regular column for Psychology Today called "Shifting Forward: A Wanderer's Musings." www.cjanework.com

Caregiver Stress and How to Manage It

By Julie Cooper

eing a caregiver for someone with Alzheimer's disease *does* have its rewards. Sharing special moments with a loved one. Feeling good about being there for them after all they've done for you. Learning to be more compassionate, more patient. Having a sense of purpose.

But there *is* a definite downside that comes with caregiving: Stress!

Caregivers are more stressed out than those who do not have this role. And caregivers of people with dementia experience higher levels of stress than other caregivers. This isn't surprising when you consider that dementia caregivers tend to provide more hours of care and more extensive assistance with personal care (bathing, dressing, feeding) and management of finances, among other things.

Stress, we know, is an unavoidable fact of life. In small doses, it can be our ally, helping us rise to challenges by making us more alert and focused. But when stress is long-term (chronic), it can wreak havoc on our health and well-being, causing all sorts of problems. Exhaustion, insomnia, anxiety, depression, irritability, headaches, muscle tension, increased heart rate and blood pressure are typical symptoms of too much stress.

How to Start Stress-Busting

The key to reducing caregiver stress and improving your sense of well-being is by practicing self-care. This, of course, is easier said than done when you're putting in countless hours caring for others, working your day job, juggling a million things, and feeling utterly drained. But neglecting taking care of yourself

because you're too busy and tired from looking after someone else will likely only make things worse in the long run—both for you and the person under your care. So, here are some self-care ideas you can try out.

Get Some Support

Don't go it alone. Everyone needs support at times, and most people are happy to lend a hand.

Ask family members, friends or neighbors for help with day-to-day tasks to lessen your load. They could spend an evening with your loved one, get your groceries or make a healthy meal for you once a week.

Join an online or in-person support group for caregivers. Talking to others who understand what you're going through can be a stress reliever. Also, check out blogs and online community and message boards. On these, you can ask questions, get advice and support, and feel like you're not alone.





Take Time Just for You

It's vital to your sense of well-being to step outside your role of caregiver and have some "me" time. A little downtime can help you have some semblance of work/life balance and avoid burnout.

Find time each day to do something (anything!) that you enjoy. Maybe it's taking a hot bath, sitting in the sunshine, chatting with a friend (one who can make you laugh would be ideal!), watching the sun set or playing with your pet.

Take advantage of community resources that offer respite care (temporary help) so you can have a much-needed break from your caregiving responsibilities. Your community may offer adult day programs or other supportive resources.

Learn to Relax

Relaxation techniques can help you slow down and focus your mind so you can think more clearly. And this can help ease stress—in the moment and over time. Relaxation can take many forms. One easy way to relax is to practice deep breathing.

Deep breaths help slow your breathing, which can relieve tension and help you relax. Practice deepbreathing exercises a few minutes each day. It's easy to do:

- Sit, stand, or lie down. Place your hands on your lower belly.
- Breathe in deeply through your nose. Feel your lower belly expand and "fill" with air.
- Hold your breath for a count of 3.
- Slowly breathe out through pursed lips. Focus on keeping your breath slow. Continue until your belly feels "empty" of air.

Have a Nice Stretch

Muscle tension is a common response to stress, and stretching is a simple way to loosen up.

Neck stretch: Sit up straight and tuck in your chin. Place your left hand on the right side of your head. Gently pull your head to the left and hold for 10 seconds. Switch sides and repeat the exercise.

Shoulder and arm stretch: Put your hands together and lock your fingers. Then raise your hands above your head, palms upward. Hold for 15 seconds and relax.

Move Your Body

Regular exercise eases tension and helps your body and mind handle stress. It can also help you sleep better. Understandably, getting motivated to exercise can be a big challenge when you're low on time and energy.

So, try to squeeze in 5 or 10 minutes of exercise here and there, maybe when the person you're caring for is having a nap. Walk up and down your stairs, or do squats or jumping jacks.

Enjoy a Healthy Diet

A healthy diet can help your body handle stress. Go for plenty of vegetables, fruits, whole grains, fish and healthy fats such as olive oil and avocados. Think Mediterranean-style eating. If you grab food on the run, do your best to make healthier choices.

Get Enough Rest

A good night's sleep, or even a nap, can make the whole world look better. Rest prepares your mind and body to deal with daily challenges. It's also important for your general health.

Get up at the same time each day, even on weekends. Avoid caffeine late in the day. And limit alcohol before bed.

Spend some quiet time, or listen to soothing music, to unwind a bit before going to bed.

Be Patient with Yourself

If you can't seem to get any relief and the stress becomes overwhelming, consider talking to a professional such as a counselor, clergy, social worker or your family doctor.

And keep in mind that learning to manage stress takes time. No matter how good you get at it, there will still be stumbling blocks along the road. On some days, you'll manage stress better than on others. Keep taking small steps. These will carry you forward toward your goal of a less-stressful life. •

The Power of Giving

Save the Neurons

The commitment to donate your time, energy and money to make the world a better place is extraordinary. At the Fisher Center for Alzheimer's Research Foundation we rely heavily on your generous support to save the billions of neurons (nerve cells) in the brain of those that are affected by Alzheimer's disease. It is important for you to know that Alzheimer's disease is not a normal part of aging and every 65 seconds another person develops this devastating disease.

Although scientists do not know the exact causes of the disease yet, they have discovered that Alzheimer's disease is the manifestation of various pathological modifications happening in the brain and involving a number of biological functions. At the center are two key components: a fragment of a protein called beta-amyloid and a protein called tau. Beta-amyloid is known to accumulate and aggregate with itself outside of the nerve cells (neurons) leading to amyloid plaque deposition. The



tau protein also accumulates and aggregates with itself leading to tau neurofibrillary tangles inside the cells. These are the two main hallmarks of Alzheimer's disease. Beta-amyloid is a sticky compound that forms in the brain that disrupts the communication between neurons and eventually kills them off. Many researchers believe that the processes between formation, accumulation or disposal of beta-amyloid are the primary causes for Alzheimer's. With your support we can help fund research to further understand beta-amyloid and eventually find a cure. This November join us for our Save the Neurons Campaign in honor of Alzheimer's Awareness Month and #GivingTuesday. To learn more about our Save the Neurons Campaign follow us on Facebook (facebook.com/ALZResearch), Instagram (instagram.com/alzinfo), and Twitter

(twitter.com/fishercenter) for the latest news and updates on how you can support us as we fight to end Alzheimer's.

Community Fundraising Spotlights

Forget Me Not Fest

After watching his great uncle suffer from Alzheimer's disease, Mike Amato decided he had to do something more to help find a cure and further research. Mike comes from a really big family, with his grandmother being one of six and his mother being one of eight. They only really get together during the holidays. One Christmas, Mike began to realize how much his great uncle struggled with the disease as he witnessed him wandering around the house looking at everyone he had known his entire life and saying, "Wow, everyone is so nice, who are all these people?" At this moment, Mike realized how horrible this disease was and decided he was going to do something to honor his uncle. Mike chose to take one of his own favorite pastimes—music—and couple it with a meaningful cause through the Fisher Center for Alzheimer's Research Foundation. Mike created social media pages to promote his event, sold tickets online, created raffle



Mike Amato and his girlfriend, Dakota

items with the support of local artists and businesses, and planned an amazing lineup that showcased the bands With the Punches, Belmont, Keep Flying, Rarity, Stickup Kid, Young Culture, You vs. Yesterday, Shorebreak and Parallel. He named the benefit to honor his uncle the "Forget Me Not Fest." As a first-time fundraiser, Mike was surprised at how fast his event grew and how many people were so willing to support. He said if he could give one piece of advice to anyone thinking about planning a fundraiser, he would tell them, "Always start as early as you can." Mike was able to create a new summer event with family and friends that he plans to host annually as well as create impactful summer memories by donating 100% of the proceeds to the Fisher Center from Alzheimer's Research Foundation.

Shop For A Cause

Angela LeVota is Velvet by Spencer and Graham's East Coast Regional Manager. Though she has been fortunate enough not to have witnessed Alzheimer's disease firsthand, she encounters countless customers almost every day who have. Angela says that, on a regular basis, several of the customers from Velvet's Madison Avenue location in New York City will come in to shop on their way to visit a loved

one who is living with Alzheimer's disease. Realizing the impact this devastating disease had on her customers, she decided she wanted to support a charity that was meaningful to them. After conducting some research online, Angela came across the Fisher Center on Charity Navigator, one of the nation's largest unbiased charity evaluators, and decided to move forward with creating Velvet's portion of sales fundraising campaign to support the fight against Alzheimer's disease. Angela said "We wanted to find a charity that would give the greatest amount of money towards the cause and saw that the Fisher Center was one of the top charities listed on Charity Navigator in the area." She went on to say, "This was Velvet's first time conducting a point-of-sales campaign and the process was so easy. We truly feel this was a great initiative for both the charity and our brand because we have definitely seen an increase in customer loyalty since we aligned our brand with such a worthy cause." Through Velvet's support, the Fisher Center is able to keep



Angela LeVota and the staff of Velvet, Madison Ave location

moving forward towards finding a cure, understanding the causes and improving the care of those affected by Alzheimer's disease.

We cannot thank both Mike and Velvet enough for their support, because we know that together we can end Alzheimer's! •



To learn more about how you can create a fundraising campaign to support Alzheimer's research, please contact Christina Hall at chall@alzinfo.org.

Fisher Center Researchers Discover That Care Management Program Improves Outcomes

tudies of how a specific care management program combined with a commonly prescribed Alzheimer's drug found stunning improvements in reducing the need for anti-anxiety medications and hospital visits.

The study was conducted by lead author Barry Reisberg, MD, professor of psychiatry and director of the Zachary and Elizabeth M. Fisher Alzheimer's Disease Education and Resources program at New York University's Langone Center, along with coauthor Sunnie Kenowsky, DVM, co-director of the program. The new studies built on the findings of a study conducted last year that found similar improvements in patient outcomes.

The new research found that combining Memantine, an Alzheimer's drug, with the care management program called Comprehensive, Individualized, Person-Centered Management (CI-PCM) enabled Alzheimer's patients to improve their daily function by about 7.5 times.

"Alzheimer's and dementia clinicians are aware that medications alone do not affect disease progression and have only modest symptomatic effects," says Dr. Reisberg. "Our new research shows that a comprehensive, patient-centered care program brings significant benefits in daily activities, which are important to individuals with Alzheimer's and those who care for and about them."

Specifically, the combination of the program and Memantine reduced the need for anxiolytic (anti-anxiety) medications by 100 percent, reduced hospitalizations by 67 percent, and emergency room visits by 50 percent.

The care program includes care partner training, residence assessment, therapeutic home visits and care partner support groups.

One of the most encouraging results of the study is the impact that the CI-PCM program has on the need for anti-anxiety drugs. These drugs are known to cause potential harm to Alzheimer's patients. "The



Barry Reisberg, MD

"Our new research shows that a comprehensive, patient-centered care program brings significant benefits in daily activities, which are important to individuals with Alzheimer's and those who care for and about them."

— Barry Reisberg, MD

CI-PCM study appears to be one of the first nonpharmacological intervention studies associated with



a decrease in anxiolytic medication usage in people with Alzheimer's disease," says Dr. Reisberg. "We now know that anxiolytic medication causes an increase in death, stroke and accelerated cognitive decline in people with Alzheimer's."

The study was a blinded and randomized, controlled trial that lasted 28 weeks. As part of the trial, 10 patient-care partner dyads who had enrolled in the CI-PCM program were compared with 10 patients and their care partners who received standard community care, which included referrals to resources for caregiver training; care counseling; physical, speech and occupational therapy; medicalert bracelets; day care centers; and support group programs. At the end of the study, the two groups were compared using a clinical test called Functional Assessment Staging (FAST) that measures losses in a person's ability to carry out daily activities independently, including dressing, bathing and toileting. Implementation of a CI-PCM program could lead to significantly lower AD care costs by way of reducing hospital and ER visits for patients, according to Dr. Kenowsky.

No significant new drug has been approved by the Food and Drug Administration (FDA) for Alzheimer's disease since 2003, when Memantine was approved. Dr. Reisberg was the principal author of the study that was used by the FDA in approving that drug. With so many failed clinical trials since then, new therapeutic approaches to treating Alzheimer's patients have been sorely needed.

Because Alzheimer's disease is considered a degenerative condition, little emphasis has been placed

on retraining patients, according to Dr. Reisberg. The team's prior work had shown that functions that suffered losses related to Alzheimer's disease occurred in reverse order from the sequence in which the skills are acquired, a process the team named "retrogenesis." This process suggests that people with advanced Alzheimer's disease can still learn if training matches the developmental age level that the disease has restricted them to.

One of the techniques Dr. Kenowsky pioneered is that of "memory coaching," which teaches patients how to re-acquire skills they have lost in combination with other supportive programs. Dr. Reisberg says that the new study validates that hypothesis.

"While there are many great resources for people with Alzheimer's and their families within communities, direct training in basic skills in more severe and more disturbed persons with Alzheimer's is an underutilized and understudied treatment method in the clinic setting," says Dr. Reisberg.

The research was supported by the Fisher Center for Alzheimer's Research Foundation.

The Fisher Center is one of the largest and most modern scientific facilities in the world dedicated to solving the puzzle of Alzheimer's disease. Founding director Dr. Paul Greengard, a Nobel laureate and neuroscientist, leads the world-renowned team at the Fisher Center in searching for a cure for the disease. The Fisher Center takes a three-pronged approach to Alzheimer's disease: finding a cure, understanding the causes of Alzheimer's disease and improving the care of people living with Alzheimer's to enhance their quality of life. •

Language Troubles: Understanding Aphasia

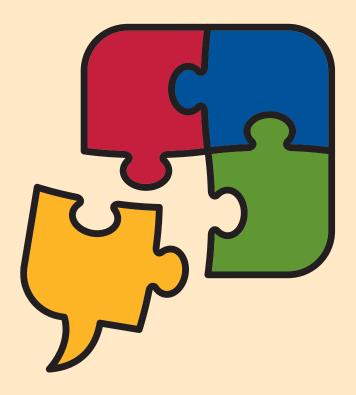
By Karen Michels

hen it comes to Alzheimer's disease, memory issues often receive the lion's share of attention. The disease can have a host of other less-talked-about effects, both subtle and profound. One of these is trouble with language, a condition known as aphasia. Aphasia results from damage to the left side of the brain, where the language center resides. It is most common after a stroke, but many people with Alzheimer's disease also develop it, especially in the middle to later stages of the disease.

Aphasia affects a person's ability to speak, write and understand words. If the brain of a person with aphasia has trouble processing words, the person will have a hard time following instructions or understanding questions. As you can imagine, determining whether a person with Alzheimer's disease has aphasia can be a challenge. If you ask your loved one, "Did you eat lunch?" she might answer, "I don't know." It could be memory issues that result in her being unable to remember. Or, it could be that aphasia gets in the way of her even understanding the question.

Aphasia affects a person's ability to speak and express words. There are two broad types of aphasia speech—fluent and non-fluent. Mary, a 78-year-old woman with AD, has fluent aphasia. She loves to talk and does it freely. When she wants to know what's on the menu for lunch in her care facility, she asks: "What is the dog with the peanut butter? The thing that takes the time to go around the corner?" People with fluent aphasia often talk easily but make little sense. They use complete sentences and correct grammar, but the words are jumbled or even made-up. They may enjoy having conversations, however, and may not realize that they are not using the right words.

George, an 82-year old with AD, has non-fluent aphasia. George talks very little. He finds it hard to come up with the words he wants. When asking for a glass of water, George often says, "Want...cup...



thing." People with non-fluent aphasia have trouble finding words and getting words out. Instead of talking in full sentences, they often use short phrases that sound almost like telegrams. They talk slowly and hesitantly, and may show signs of frustration with their inability to speak.

Symptoms of Aphasia

As Mary and George show, aphasia can vary from person to person. Here are some of the more common symptoms:

- Having trouble finding the words for objects or expressing ideas.
- Using word or phrase substitutions. (These might be related words, such as saying "time thing" instead of "watch," or unrelated words, such as saying "tree" instead of "milk.")

- Talking around a word to try to communicate its meaning. ("I sleep in a bed" might become "I go in the flat thing in the dark.")
- Using nonspecific terms, such as "it," "thing" and "over there."
- Using gestures in an attempt to communicate words and meanings.
- Leaving out supporting words and talking in broken sentences (such as "have book?" instead of "May I see that book?"
- Continuously repeating words or sounds.
- Parroting words.
- Using meaningless sounds or nonsense words.

Struggling to communicate—and watching someone you love engage in this struggle—can be anxiety-provoking for everyone. As with other effects of Alzheimer's disease, a healthy dose of patience is invaluable when dealing with aphasia.

Finding Ways to Cope and Communicate

Unfortunately, aphasia provides additional challenges for patients and caregivers who are trying to live and cope with Alzheimer's disease. Still, there are useful tips to help make communication less frustrating for all concerned.

When Listening

When trying to understand a person with aphasia, have patience. Though it is tempting to interrupt, rush them, or correct their speech, these will increase stress on both sides and can make the problem worse. Instead, give the person plenty of time to talk. Turn off background distractions, such as the TV or radio. Focus your attention on the person. If a person is struggling to find a word or phrase, offer gentle suggestions, providing one or two choices for the person to respond to. Instead of just listening to the words, try to read the person's tone, body language and gestures to help determine what they are trying to say. Validate the *emotional*

content of their expression, even if the exact meaning eludes you.

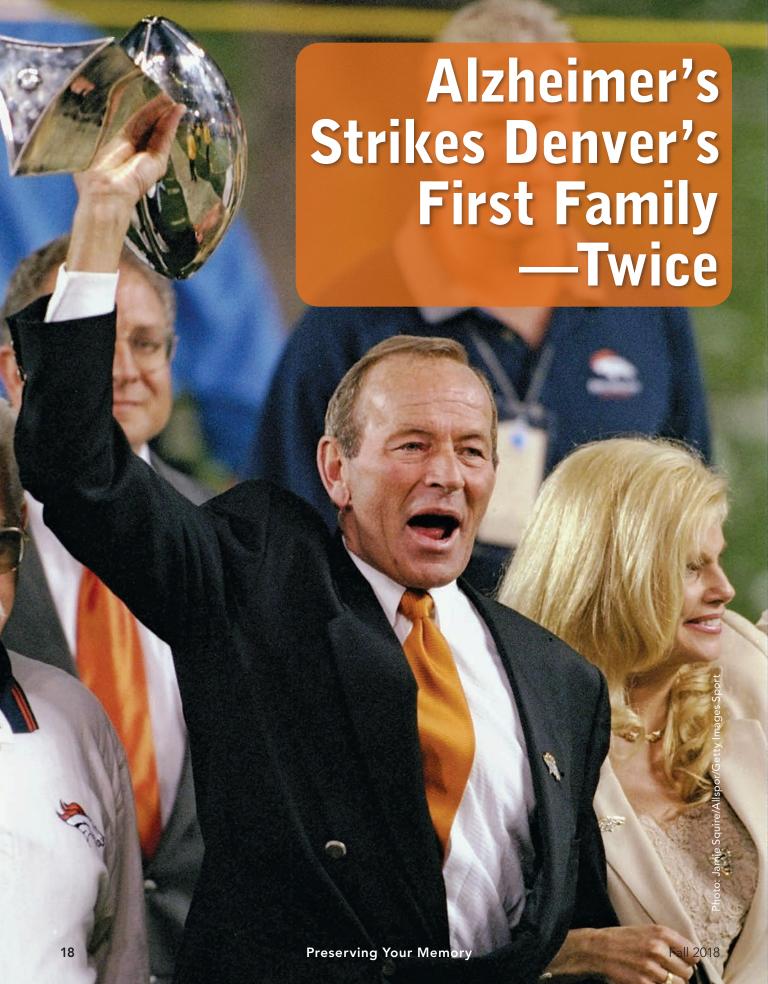
When Speaking

When talking to someone with aphasia, try to talk slowly and clearly. It's best to use short, simple sentences and cut out abstract details and concepts. Focus on the important words or phrases, perhaps repeating them. When possible, ask questions with yes or no answers. Use body language and gestures to help reinforce what you are trying to say. Point out objects or people. Demonstrate activities, such as standing up or taking a drink. Having pictures of common objects that the person can point to can be helpful.



The Bottom Line

Struggling to communicate—and watching someone you love engage in this struggle—can be anxiety-provoking for everyone. As with other effects of Alzheimer's disease, a healthy dose of patience is invaluable when dealing with aphasia. And remember: If you listen for feelings instead of facts, you may end up hearing a kind of poetry in your loved one's words.



Denver Broncos owner Pat Bowlen announced his Alzheimer's diagnosis in 2014. In June of this year, his wife, Annabel, announced that she has been diagnosed with the disease as well.

n Denver and beyond, the Bowlen family needs no introduction. Since Pat Bowlen purchased the NFL's Denver Broncos in 1984, the team has represented the pinnacle of success on the field, even as the Bowlen family made an equally powerful impact in their community off the field.

A New Owner and a Huge Impact

On March 23, 1984, Pat Bowlen was introduced to the media as the Broncos' new majority owner. That day would come to represent a turning point

for the franchise and the city it calls home. The impact of the Bowlen family on both the team and the city has been dramatic.

Simply put, the Broncos have set the standard for success on the field. Since 1984, the Broncos have won three Super Bowl titles, appeared in seven Super Bowls, have had more winning seasons (28) than any other franchise, and have won 348 games—the second-most in the league during that span and a tie for fifth in NFL history. The Broncos' famously rabid fan base has responded in droves to that success during that time. During Bowlen's ownership, the Broncos have sold out all 292 regular season and playoff home games, drawing more than 20 million fans from 1984 through the 2017 season—a significant part of the team's 48-year, 395-game home sellout streak. That's the longest in NFL history for one city. As Bowlen himself stated more than once, "I want us to be number one in everything."

Known as a player's owner, Bowlen was known for stopping in to the training room every day to talk to the players and staff.



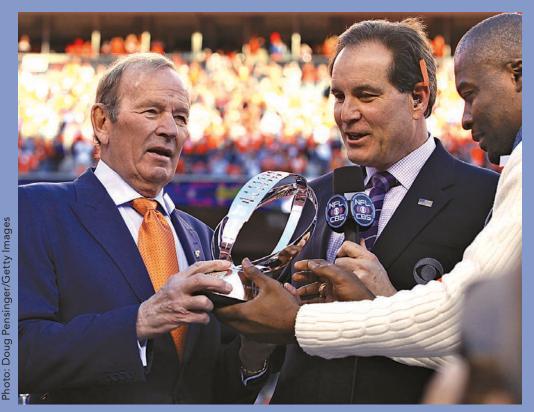
Pat Bowlen speaks during a news conference announcing quarterback Peyton Manning's contract with the Denver Broncos.

No surprise, then, that Pat Bowlen was inducted into the Broncos' Ring of Fame in 2015 and has been named a contributor finalist for the Pro Football Hall of Fame in Canton, Ohio. (The year 2015 also saw Bowlen added to the Colorado Business Hall of Fame.)

Pat Bowlen's impact on the city of Denver transcends his leadership of the Broncos. As chairman of the board of Denver Broncos Charities, he has donated more than \$30 million to Denver-area charitable organizations since the fund's inception in 1993. Bowlen is also one of the largest donors to the University of Denver and a major presence in Denver's nonprofit community. In 2013, Bowlen received the Mizel Institute Community Enrichment Award for his community leadership and overall commitment to Denver and the state of Colorado.

In addition to his dedication to his team and community, Pat Bowlen has had an enormous impact on the NFL itself. He served on 15 league committees during his tenure, including negotiating recordbreaking TV contracts and several extensions to the NFL's Collective Bargaining Agreement.

Photo: Justin Edmonds/Getty Images



Pat Bowlen celebrates an American Football Conference (AFC) Championship win.

Background of a Champion

Pat Bowlen was born on February 18, 1944, in Prairie du Chien, Wisconsin. He went on to earn degrees in business (1965) and law (1968) from the University of Oklahoma. He had successful careers in oil, gas and real estate before purchasing the Broncos in 1984.

Part of the secret to Bowlen's success was his active lifestyle. He competed in the Ironman Triathlon (2.4-mile swim, 112-mile bicycle ride and a full marathon, all consecutively) as well as other triathlons and marathons throughout his life.

Pat Bowlen and his wife, Annabel, have five children: Patrick, Johnny, Brittany, Annabel and Christianna. He also has two daughters from his first marriage: Amie Bowlen Klemmer and Beth Bowlen Wallace.

The Toll of Alzheimer's on the Family

In July 2014, Pat Bowlen announced that he'd been diagnosed with Alzheimer's disease and would be stepping down from his role as CEO of the Broncos. The news came as a huge blow to the team, the league and the Denver community.

It was also a reminder of the family's past. Pat Bowlen's mother, Arvella, had passed away from Alzheimer's disease in 2006. Then, in June 2018, Pat's wife, Annabel, announced that she too had been diagnosed with Alzheimer's. Upon her announcement, Annabel Bowlen told the Denver Post that since her husband's diagnosis, she and her family had gained a "vivid understanding of the disease's progression and its effect on those living with it as well as their family."

Even in announcing her diagnosis, Annabel shone brightly. "I intend to proceed in life with the same strength, courage and endurance that Pat has shown in his battle with this disease," she said. "Like Pat, I know there will be good days and bad days ahead."

In a joint statement released to the media upon Annabel Bowlen's announcement, the Bowlen children said: "During the last few years, all of us have been inspired by the strength and courage our mother has shown as she's supported our father in his own battle with Alzheimer's disease. We're confident that she will bring the same grace, compassion and determination to her fight. ... We'll continue to support our parents, stay strong as a family and do our part to raise awareness for everyone affected by Alzheimer's disease."

The Toll of Alzheimer's on the Nation

Some 5.7 million Americans currently live with Alzheimer's disease, and that figure is growing.

In fact, it's expected to reach 14 million by the year 2050. Currently, Alzheimer's disease is the 6th leading cause of death in the United States.

Caregiving for someone with Alzheimer's or another dementia is a major role for some 15.7 million Americans, who provide care for loved ones without payment, according to the Family Caregiver Aliiance. The value of the estimated 18.4 billion hours of care provided by these caregivers was \$232 billion in 2017.

The Search for a Cure

Led by Nobel laureate Dr. Paul Greengard, the Fisher Center lab at The Rockefeller University is at the forefront of the search for the cure for this devastating disease. Among the largest and most modern in the world, Dr. Greengard's laboratory, which includes more than 50 world renowned researchers, has pioneered major advances in understanding the condition and identifying better treatments and hopefully a cure. The Fisher Center for Alzheimer's Research Foundation directly supports the work of the laboratory. To donate to this important cause, please visit www.alzinfo.org. 🔸

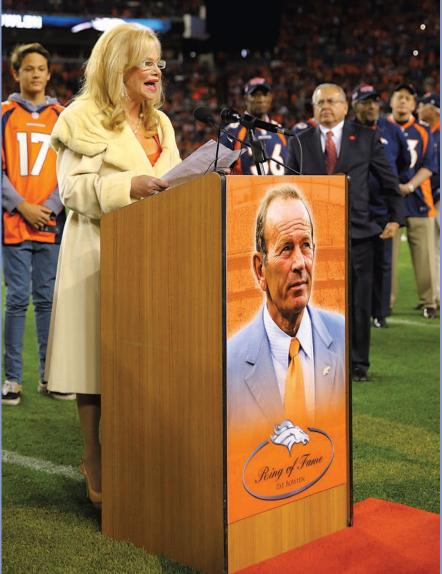


Photo: Justin Edmonds/Getty Images

(top) Annabel
Bowlen speaks at her
husband's induction
into the Denver
Broncos'
Ring of Fame.

(bottom) NFL commissioner Roger Goodell presents the Vince Lombardi Trophy to Annabel Bowlen after Super Bowl 50.



noto: Maddie Meyer/Getty Ima

X FOOL

Good for the Brain and Body: The Mediterranean Diet

By Karen Michels

way of eating, known as the Mediterranean diet, has been found to reduce people's chances of developing many health problems, such as heart disease and cancer. The latest research has shown that the Mediterranean diet also slows changes in the brain associated with Alzheimer's, reducing a person's risk for this disease.

These brain changes of Alzheimer's (such as beta-amyloid deposits) can often be found in the brain well before symptoms of the disease appear. People who follow a Mediterranean diet are less likely to have these brain changes. The Mediterranean diet has also been shown to lower blood pressure, improve cholesterol levels and reduce inflammation throughout the body—effects that greatly benefit the brain. The sooner a person adopts this diet, the greater the health benefits.



Though it may sound exotic, all the elements of the Mediterranean diet can be found in local grocery stores. Put simply, this way of eating is high in vegetables, fruits and lean proteins and low in refined grains, added sugars and saturated fat. The main elements of the Mediterranean diet are listed below.

What to Choose

- **Vegetables.** A range of colorful ones as the center of most meals.
- **Fruits.** Whole (not juices) for snacks, desserts and toppings for salads and other dishes.
- Whole grains. Brown rice, 100% whole-wheat pastas, and breads and whole versions of other grains.
- Olive oil. The main source of fat, used for cooking and drizzling over dishes.
- **Plant-based proteins.** Includes beans and legumes, soy protein and nuts.
- Fish or other seafood. On the menu 2 to 3 times a week.



What to Limit

- **Dairy and eggs.** Plain yogurt, hard cheeses and eggs as additions to other dishes.
- **Meat.** Unprocessed lean meats, such as poultry, as an accent rather than the center of the meal.
- **Alcohol.** One glass of red wine a day with the main meal, if desired.

What to Avoid

- **Saturated fats.** Found in animal fats and in any plant fat that is solid at room temperature (such as shortening, palm oil and coconut oil).
- **Refined grains.** White bread, white rice and other processed grains. Found in pastas, snacks, baked goods and many other packaged foods.
- Added sugars. Abundant in sodas, energy drinks, sweetened teas, sports drinks and other sweetened drinks. Also in candies, desserts, baked goods and even things that don't taste sweet, such as crackers and ketchup.

Moving from a Western diet, high in refined and processed foods, to the Mediterranean diet can promote brain health and reduce Alzheimer's disease risk. If you're looking to make the switch, go slowly and thoughtfully. Make changes that you can stick with.

See the Mediterranean Baked Fish recipe on page 30.

There's No Place Like Home for Exercise By Margie Rossi-Holm

By Margie Rossi-Holman

esearch shows that aerobic exercise is one of the best things you can do to reduce the risk of developing Alzheimer's disease. Some studies say it can actually improve memory after dementia sets in. But if you think that means you have to run a marathon or join a gym, think again. The truth is, daily activities you do at home, such as brisk walking, cleaning or gardening, can offer the same rewards.

You can gradually work safe, simple low-impact aerobics into your daily routine at home. Begin with a few minutes a day. Then increase the amount you exercise every week until you reach your goal. Just make sure and check with your healthcare provider before you start. If you choose activities that you enjoy, you may find you're actually looking forward to your workout and you will stick to your routine. Remember, it's never too late to start! Here are some great, low-impact aerobic exercises to try at home.

Walking is a great low-impact exercise because it can be done anywhere, at any pace. And it's easy to get started. Walking around the house, in the backyard, up and down the stairs at home or even on the sidewalk are quick and easy walking options. Walking and talking is even better! You may forget you are exercising at all.

Dancing is a good way to get moving and give your mind and body a workout at home. Research shows that learning new steps builds new neural pathways and improves decision-making. And it's fun! So, turn on your favorite music and shake it up! A chair can be used for seated dancing as well as support for those serious moves!

Chores can be counted as low-impact exercise. Floor mopping, kneading bread dough and vacuuming may seem like gentle movements, but they can build flexibility and strength and get the heart rate up.

Gardening is an enjoyable way to get your daily exercise. Digging in the dirt, watering plants,



weeding and other gardening activities work your muscles. If bending and squatting to pull weeds or dig is too much for you, a gardening stool can help you avoid injuring your back or knees.

Chair-based aerobics can be just what you're looking for to keep active if it's difficult for you to get up and about—or even if you just want a change of activity on days you can't get outdoors. The only "equipment" you need is a sturdy chair with a back support. These sitting exercises can be just as challenging as regular standing workouts and much safer.

24

The Right Time Past President of the National Academy of Elder Law Attorneys to Begin Managing an Aging Parent's Finances

t's difficult for children to know when to step in and assist aging parents with their financial affairs. Conversations about money are uncomfortable and aging parents may become defensive, suspicious or confused. It is easy to see why we resist having these conversations.

Unfortunately, as parents age, they may lose the capacity to manage their financial affairs. Cognitive decline, abetted by isolation, is a powerful force that makes aging parents easy targets for scam artists, misleading advertising and offers for high-priced, unnecessary goods and services.

Planning and Preparation Are Keys to Success

Family members should raise the topic of financial management for their aging parents well before they may become incapacitated.

Dealing with financial issues before the onset of cognitive decline allows aging parents to be fully involved in the management of their estate.

Early and full involvement by aging parents not only preserves their dignity and right to self-determination, it allows family members to have the benefit of parents' intimate knowledge of their own financial affairs.

This is a good time for aging parents to express their desires through binding legal instruments. A durable power of attorney or a trust can give the aging parent continued control over their financial affairs while also empowering a family member to step in and help when needed.

In a best-case scenario, trust documents will designate a successor trustee who can take over financial matters when the need arises. The trust should specify the conditions that trigger a trustee takeover, and perhaps give the successor trustee guidance regarding the aging parent's preferences and priorities.



Family members should raise the topic of financial management for their aging parents well before they may become incapacitated.

If a durable power of attorney is not in place, then family members will have to go to court to obtain guardianship over the parent. Not only is this a cumbersome process, but it can also result in a loss of privacy for the aging parent, whose medical condition is now recorded in public court records.

Early intervention gives family members the opportunity to acquire a thorough understanding of the aging parent's financial affairs. What are the aging parent's financial institutions and account numbers? What sources of income does the parent have? What recurring bills must be paid? What type of health insurance does the parent have? Does the parent have an attorney or financial planner? Where are the parent's important financial and estate planning documents kept?

Having this information readily available will help the family act quickly and decisively should the need arise.

If an aging parent is not initially willing to execute a power of attorney or create a trust, family members should not be reluctant to raise the subject again. Aging parents should know that, when the time comes that they do need help, family members are available to provide it.

Intervention When Warning Signs Appear

As parents age, family members should be alert for signs of incapacity or financial abuse. A deterioration of the aging parent's ability to manage everyday life activities could be an indication that they are struggling with financial matters as well. And signs of financial exploitation or abuse are direct indications that intervention is needed.

Seniors often resist doctor's visits for the express purpose of being evaluated for incapacity. Short of a doctor's visit, however, aging parents may display clues that they are struggling and need assistance:

- Their residence is messier than usual.
- They have difficulty feeding themselves.
- They refuse to shower or bathe.
- They wear the same clothes for several days.
- They struggle or seem confused in the kitchen.
- They have difficulty driving their car.
- They are uncharacteristically forgetful.
- They exhibit an unusual number of bruises or scrapes.

If an aging parent exhibits any of these warning signs, it could be an indication that they are struggling with financial matters as well. Children and caregivers should take the opportunity, while addressing the parent's non-financial challenges, to inquire whether the parent would like assistance with paying bills, balancing a checkbook or other financial chores.

Financial Exploitation or Abuse

Elder financial abuse is significantly underreported, with one estimate suggesting that just one case in 44 is reported. According to a 2016 Allianz Life Insurance Co. survey, 72% of elder caregivers cited embarrassment as the main reason why financial abuse is not reported.

Family members and caregivers should be prepared to step in if they observe signs that an aging parent is being financially exploited. The following are common signs that an aging parent might be a victim of elder financial abuse:

- Missing money or personal property
- Sudden, unexplained bank withdrawals or wire transfers
- Unpaid bills for food, medicine or utilities
- Missing bank statements, or unfamiliar names on bank and retirement accounts
- Large amounts of unopened mail
- Changes in beneficiaries on a will, retirement funds or other accounts
- The appearance of a new caregiver in the aging parent's home

The presence of any of these signs should prompt family members to investigate and offer assistance, if needed. If multiple trouble signs are present, more aggressive action may be necessary to acquire control over the aging parent's financial affairs.

Family and caregivers who lack legal authority to intervene when warning signs arise have a challenging task ahead. At least one family member will need to move quickly to acquire the legal authority to act on their parent's behalf—either through a hastily granted power of attorney or as a court-appointed guardian. Legal authority in hand, the new financial caregiver will be able to effectively step into the aging parent's shoes and begin to restore financial order.

The Consumer Financial Protection Bureau has published a set of guides to assist trustees and courtappointed guardians facing the task of managing another person's money for the first time. It's available at www.consumerfinance.gov/consumertools/managing-someone-elses-money/#courtappointed-guardians.

The assistance of an experienced attorney is invaluable in this process. Legal counsel can draft all necessary documents, provide advice on strategies for dealing with financial institutions and creditors, and make the task of financial caregiving as efficient and manageable as possible. •

Bernard A. Krooks is managing partner of the law firm Littman Krooks LLP (www.littmankrooks.com). A certified elder law attorney, he is a past president of the National Academy of Elder Law Attorneys, past chair of the elder law committee of the American College of Trust and Estate Counsel, and past president of the Special Needs Alliance.

Brain-Boosting Puzzles

"Use it or lose it." The message is simple. If you don't use your muscles, they will no longer be as effective as they should be. Of course, the brain is not a muscle; however, it has recently come to light that "mental workouts," such as solving crosswords and other puzzles, can help ward off Alzheimer's. In these pages, we offer a variety of different types of puzzles that will work out your various skills involving memory, deduction, and letter manipulation, and, we hope, also provide you with a ton of fun!

(Answers on page 29)

MATCH THESE

Identify these mountain peaks by matching them to the countries where they are at least partially located.

1 Pico de Orizaba	a. Israel
2 Mount Kilimanjaro	b. Mexico
3 Aconcagua	c. Italy
4 Matterhorn	d. Greece
5 Mount Etna	e. Japan
6 Mount Ararat	f. Argentina
7 Mount Olympus	g. Tanzania
8 Mount Everest	h. Canada
9 Mount Fuji	i. Nepal
10 Mount Carmel	j. Switzerland
11 Denali	k. United States
12 Mount Logan	1. Turkey

DROPLINE

Take the letters in the top half of each column below and distribute them in the blanks of the bottom half so that the letters spell out a wise piece of advice. The black squares are the spaces between words. One letter has been dropped in place to start you off.

W		Ε											
R	1	M	0	R	U						W	H	F
C	E	F	N	D	E	N	0	E	D	M	R	R	0
B			0	0			F	1			A		1
В													

LEAPFROG

Here's a list of famous pairs — two names for each number. Their letters are in the correct order, but they overlap. All you have to do to find the names is separate the letters.

Example: **EOUR**RPYH**D**EI**C**U**E**S — ORPHEUS & **EURYDICE**

1.	ABLURLENSN	
2.	JEBRERNY	
3.	JUROLMIEOET	
4.	CALENOTPOATNRYA	
5.	CSOHNENYR	
6.	ROASTGAERIRES	
7.	TLHOUELIMSAE	
8.	DBAGLOWONODIDE	
9.	MDRRJHEKYYDLEL	
10.	JONASPEOPLHEIONNE	



VISIT US AT KAPPAPUZZLES.COM

BRAIN-BOOSTING CROSSWORDS

(Answers on page 29)

We have provided two crosswords here to sharpen your puzzle skills. Start with the one on the left, which is the easier puzzle. In this one we have provided solving aids, such as the number of words in multi-word entries. The puzzle on the right is a medium-level puzzle and those solving aids are not provided. The second puzzle is thematic: the title "You'll Have to Show Some 'I.D.' " is a hint. Have fun testing your knowledge while doing something that's good for you!

	1	2	3	4		5	6	7	8	
9						10				11
12						13				
14				15	16			17		
18			19		20		21			
			22	23						
24	25	26					27	28	29	30
31				32		33		34		
35			36			37	38			
39						40				
	41					42				

Across

- 1. "M*A*S*H" actor Jamie
- 5. Utilizes
- 9. "Sound of Music" role
- 10. Maritime
- 12. Particles
- 13. Teacake
- 14. Laughing _
- 15. School org.
- 17. Beer container
- 18. French islands
- 20. Proposals
- 22. Kitchen device
- 24. Egypt's continent
- 27. Local pool spot,
- perhaps (abbr.) 31. Sis's counterpart
- 32. Conjunction, informally
- 34. Stately tree
- 35. Semicolon bottom

37. Math proportion 24. Fundamentals 39. Ale holder

25. Beer head

26. Juliet's beloved

29. Cuts quickly

33. Killer whale

preceder

38. Jackie O's

30. "Famous"

28. Iron or aluminum

cookie maker

36. Behave or print

second husband

- 40. Dice game
- 41. Nylons
- 42. Feels sick

Down

- 1. Deadly
- 2. Got up
- 3. Border
- 4. Scrape roughly
- 5. Dangerous
- 6. Cul-de-___
- 7. Summon, as a
- memory
- 8. More sound
- 9. Wise trio of the
- 11. Millipede's
 - multitude
- 16. Synagogue
- scrol1 19. School subj.
- 21. Use a skillet
- 23. Fuel ingredient

You'll Have to Show Some "I.D."

Across

- 1. ___ hat
- 4. Actor Vigoda ("Barney Miller")
- 7. Cabbing cost
- 11. Road shoulder
- 13. Hombres
- 14. Winglike 15. Robert Sherwood play named for a
- solitaire game 18. ____ forma
- 19. Clean off
- 20. Tariff on foreign goods
- 25. Actress Zetterling et al.
- 26. Holm and McKellen of "Lord of the Rings"
- 27. Writer Umberto
- 30. Mentally competent
- 31. Lawyer's deg.
- 32. Treat snootily
- 33. Texting abrreviation for "Wow!"
- 34. Jai _
- 35. Should that be the case
- 36. Juicy tidbit from someone with

- special knowledge 38. Singer Rimes
- 41. "Con _ (1997 action
- flick) 42. Modern-dance diva of the early 20th century
- 48. Garment of Delhi
- 49. Motel's kin
- 50. Actor Barry
- 51. Conduit
- 52. Whoopi's role in "Ghost"
- 53. Nobelist Hammarskjöld

Down

- 1. Item in a geisha's wardrobe
- 2. Escorted
- 3. Very wet 4. They follow
- midnights: abbr.
- 5. Futon, e.g.
- 6. Wind dir.
- 7. Sprite
- 8. Pool plant
- 9. Bowl shouts
- 10. Costume designer of the '20s
- 12. Melancholy

- 16. Craggy hill
- 17. "___ Dance" (Goodman's theme song)
- 20. "___ Tired" (Beatles)
- 21. Grown-up miss
- 22. Works the soil
- 23. ___ Lama
- 24. Raveled
- 27. Got tough
- 28. Point
- 29. Flute's orchestral
- neighbor 32. "Tin Men"
- product 34. ____ regni
- 36. Film made outside the studio system
- 37. Perrier, to Pierre
- 38. Say "yeth"
- 39. Actor Morales
- 40. 50-and-up org. 43. Diamond _
- (country band) 44. "Conjunction
- Junction" freight 45. Genetic info
- carrier
- 46. Literary orts
- 47. Not positive: abbr.

_	_	_	_									
1	2	3			4	5	6		7	8	9	10
11			12		13				14			
15				16				17				
		18						19				
20	21				22	23	24					
25					26					27	28	29
30					31				32			
33				34					35			
			36					37				
38	39	40						41				
42					43	44	45				46	47
48					49				50			
51					52					53		

BRAIN-BOOSTING PUZZLES HIDDEN-MESSAGE WORD-FIND™

After you have located and circled in the diagram all the words in the list below, read the leftover (unused) letters from left to right, line by line, to reveal a quote about butterflies from Richard Bach, author of "Jonathan Livingston Seagull."

ARRANGEMENT	IDENTIFY	W	Т	N	Ε	M	Ε	G	N	A	R	R	A	D	Н	A
BOARD	INSECTS	Т	Ε	Т	В	G	N	I	Υ	D	U	Т	S	A	Н	Ε
BOTTLE	LABELS	S	N	В	Н	0	В	В	Υ	G	С	A	Т	Ε	Т	Ε
BOX	LOCATION	R	P	L	0	С	A	Т	I	0	N	P	1	R	С	L
BUTTERFLIES	NET	L	A	Ε	R	X	W	R	С	A	L	I	A	P	A	L
CAPTURE	PINS	S	P	Ε	С	I	Ε	S	D	S	Т	D	Т	S	P	Н
CLUB	RESEARCH	Ε	Ε	N	N	R	F	I	N	D	I	N	G	N	T	В
COLLECTING	SPECIES	Н	D	G	0	D	0	F	Т	N	Н	S	Ε	W	U	0
DATE	SPREAD	С	S	R	L	D	A	F	G	Т	Н	Ε	G	L	R	Н
DISPLAY	STUDYING	R	M	A	S	Т	Ε	Т	R	С	A	В	С	A	Ε	L
FIELD GUIDE	TAGS	A	L	G	N	1	Т	С	Ε	L	L	0	С	В	T	S
FINDING	TRADING	Ε	D	1	S	Р	L	A	Υ	F	I	Т	N	Ε	D	I
FORCEPS	WINGS	S	P	I	N	S	Ε	С	Т	S	A	Т	В	L	U	Т
HOBBY		Ε	D	I	U	G	D	L	Ε	I	F	L	Т	S	Ε	R
HUNTING		R	В	U	Т	Т	Ε	R	F	L	I	Ε	S	F	L	Υ

SUDOKU

To complete the puzzle below, fill in the squares so that each digit 1 through 9 appears exactly once in each row, in each column, and in each enclosed nine-unit block.

		3						
	6		9		8	1		
					7	3	4	
				2				6
2	7		3		6		8	5
5				4				
	3	9	2					
		8	6		9		3	
						7		



Match These

1b, 2g, 3f, 4j, 5c, 6l, 7d, 8i, 9e, 10a, 11k, 12h.

Dropline

Before you borrow money from a friend, decide which you need more.

Leapfrog

1. Burns & Allen; 2. Ben & Jerry; 3. Romeo & Juliet; 4. Antony & Cleopatra; 5. Sonny & Cher; 6. Astaire & Rogers; 7. Thelma & Louise; 8. Blondie & Dagwood; 9. Dr. Jekyll & Mr. Hyde; 10. Napoleon & Josephine.

Hidden Message

What the caterpillar calls the end of the world, the master calls a butterfly.

Crossword 1 F A R R U S E S M A R I A N A V A L A T O M S S C O N E G A S P T A K E G I L E S O F F E R S C O R E R A F R I C A Y M C A B R O T H O E L M C O M M A R A T I O S T E I N C R A P S H O S E A I L S

WORD-FIND WINEMEGNARRADHA TETREMENTYDUTSAHE CNEMEBBDCATE ERCONTIONPING LARRAMREINDNAMTB HERNAREINDNAMTB HOGOOFTWHEEWOOD CORLDAPGTHEWOOD RMASTETRCABCAEL ALGNITCELLOBBS EDISPLAWFITNEDD SEDISPLAWFITNEDD SEDISPLAWFITNEDD SEDISPLAWFITNEDD SEDISPLAWFITNEDD SEDISPLAWFITNEDD SEDISPLAWFITNEDD

Crossword 2 O L D A B E F A R E B E R M M M E N A L A R I D I O T S D E L I G H T P R O F T D U T Y M A I S F I A N S E C O S A N E L L D S N U B O M G A A L A I A I I F S O D M G A A D U N C A N S A R I F I N N G E N E P I P E O D A G

	Sudoku													
8	5	3	4	1	2	6	9	7						
4	6	7	9	3	8	1	5	2						
9	1	2	5	6	7	თ	4	8						
3	8	4	7	2	5	9	1	6						
2	7	1	3	9	6	4	8	5						
5	9	6	8	4	1	2	7	3						
7	3	9	2	5	4	8	6	1						
1	2	8	6	7	9	5	3	4						
6	4	5	1	8	3	7	2	9						

YOU CAN MAKE A DIFFERENCE!

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X FOOD

Mediterranean Baked Fish

Taste the Mediterranean in this dish's tomato, onion and garlic sauce.

Yield: 4 servings

Serving size: 4-oz fillet with sauce

- 2 tsp olive oil
- 1 large onion, sliced
- 1 can (16 oz) whole tomatoes, drained (reserve juice), coarsely chopped
- ½ cup tomato juice (reserved from canned tomatoes)
- 1 bay leaf
- 1 clove garlic, minced
- 1 cup dry white wine
- ¼ cup lemon juice
- ¼ cup orange juice



- 1 tbsp fresh orange peel, grated
- 1 tsp fennel seeds, crushed
- ½ tsp dried oregano, crushed
- ½ tsp dried thyme, crushed
- ½ tsp dried basil, crushed
- to taste: black pepper
- 1 lb fish fillets (sole, flounder or sea perch)

Directions

- 1. Heat oil in large nonstick skillet. Add onion and sauté over moderate heat for 5 minutes or until soft.
- 2. Add all remaining ingredients except fish. Stir well and simmer, uncovered, for 30 minutes.
- 3. Arrange fish in 10-by-6-inch baking dish. Cover with sauce. Bake, uncovered, at 375° F for about 15 minutes or until fish flakes easily.

Each serving provides:

Calories: 178 Total fiber: 3 g

Total fat: 4 g Protein: 22 g

Saturated fat: 1 g

Cholesterol: 56 mg

Carbohydrates: 12 g

Potassium: 678 mg

Sodium: 260 mg

Source: "National Heart, Lung, and Blood Institute: Keep the Beat Heart Healthy Recipes"

Fisher Center Scientist Spotlight

Thanks to the outstanding work of Fisher Center's world-renowned scientists, we are getting closer to finding a cure!



Dr. Alona Barnea

Postdoctoral Associate at the Fisher Center for Alzheimer's Research at The Rockefeller University

Hometown:

Alona was born in Israel, in a small town close to Tel Aviv.

Education:

After obtaining her bachelor's degree in Israel, Alona completed her master's degree in neuroscience at the University of Oxford in the UK. She continued to a PhD in clinical neuroscience at the University of Oxford as a Clarendon Scholar and moved to NYC to join Dr. Greengard's laboratory in November 2015.

Fun Fact:

- Before studying neuroscience, Alona studied visual arts and completed a bachelor's degree in psychology and anthropology. She was fascinated with human behavior and the brain and made the decision to transition to studying neuroscience and specifically molecular and cellular biology.
- Alona is a sergeant in the Israeli army. She served for 2 years and was a commander of more than 300 soldiers. After leaving the army, she embarked on a 6-month backpacking trip to India, and returned to start her bachelor's degree in Israel.

Research Discoveries:

Dr. Barnea's research, under the direction of Nobel laureate Dr. Paul Greengard, is focused on the discovery of new pathways for the study and treatment of Alzheimer's disease.

In her previous research, Dr. Barnea designed a specific treatment that combines non-viral gene therapy with stem cell research to treat neurodegenerative disease. She joined the Greengard lab to develop a new approach to studying Alzheimer's disease—one that uses stem cells produced from Alzheimer's patients' own skin cells. This technique involves taking a small number of skin cells from patients with Alzheimer's disease and in a defined method in the lab "turning back time" to turn these "old" skin cells into "young" stem cells that have the capacity to develop into any type of cell in the body—just like embryonic cells. Patient-specific stem cells contain the exact same DNA that is found in the patient, so they can be used to study different genetic abnormalities as well as different treatments for Alzheimer's disease. Dr. Barnea is using stem cells derived from Alzheimer's patients to generate brain cells in the lab. She is working to produce the type of brain cells that are first affected in Alzheimer's disease, in order to find out what is different about these cells in patients and what causes them to degenerate. Through this new research platform, the lab hopes to better understand the causes of Alzheimer's and to discover a treatment for this devastating disease.

We want to thank Dr. Barnea and all of our world-renowned scientists at the Fisher Center who work hard every day in the quest to find a cure.

Zachary & Elizabeth M. Fisher Center for Alzheimer's Research Foundation 110 East 42nd St, 16th Floor New York, NY 10017



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