

preserving your memory

Summer/Fall 2017

U.S. Rep. Tom Cole

We talk with the
Congressional leader
and advocate for
Alzheimer's research

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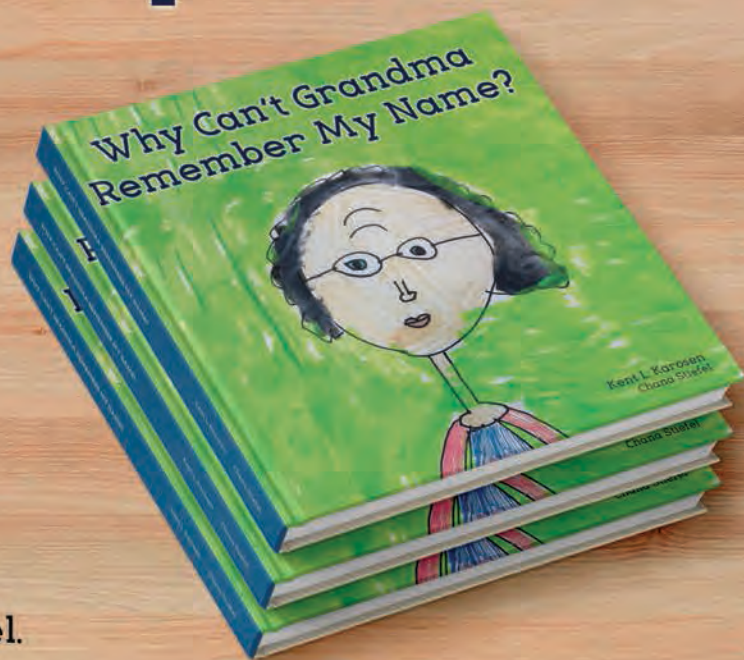
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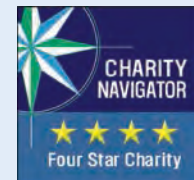
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Making the Transition

Welcome to the Summer/Fall issue of *Preserving Your Memory*! We hope this issue helps bring some welcome relief from the summer heat as we look forward to fall's cooling.

The Fisher Center for Alzheimer's Research has published exciting new research that identifies a particular pathway by which beta-amyloid is created and destroyed. As you may know, beta-amyloid is the telltale protein found in the brains of Alzheimer's patients. You can read about these new developments in this issue on page 14.

For our cover, we speak with Rep. Tom Cole (R-Okla.), a major congressional voice to increase federal funding for Alzheimer's disease research (page 18). Rep. Cole lost his father to Alzheimer's disease.

Getting sufficient daylight is vital for Alzheimer's patients and caregivers. Find out why on page 10. And art therapy is building an important link between the visual arts and Alzheimer's patients (page 12). I co-wrote a book, "Why Can't Grandma Remember My Name?", on this subject with Chana Steifel. The book features the artwork of Alzheimer's patients and children, and is available through the Fisher Center for Alzheimer's Research Foundation: www.ALZinfo.org/book.

We hope this new issue helps you ease into the transition between summer and fall.

Sincerely,



Kent L. Karosen
President & CEO



Kent L. Karosen

Please send your tips, stories or questions to:

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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 six 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

Midlife Heart Risks Raise Alzheimer's Risk

People who have risk factors for heart disease in middle age are at increased risk of developing Alzheimer's disease later in life, according to an analysis of more than 15,000 men and women that began in 1987. Those who had heart risks at the start of the study, when they were 45 to 64 years old, were more likely to develop Alzheimer's up to 25 years later.

Some factors, like diabetes, increase the risk almost as much as a specific gene that can raise the chances of developing Alzheimer's later in life, the study found. Smoking and high blood pressure also raise the risk for dementia.

Earlier reports have shown that being overweight or leading a sedentary life, both risk factors for heart disease, likewise raise the risk of dementia.

"The health of your vascular system in midlife is really important to the health of your brain when you are older," said Dr. Rebecca Gottesman of Johns Hopkins University, the lead researcher of the study. Poor blood flow to the brain may lead to the onset of



dementia, or make symptoms of Alzheimer's worse. The findings were presented at the American Stroke Association's annual conference.

Varied Mental Challenges Help Keep the Mind Sharp

Do you regularly do crossword puzzles? Have a regular bridge game or crafts group? Enjoy poking around on the computer? If so, you're likely at lower risk of developing memory and thinking problems compared to your peers who do few or none of these mentally stimulating activities, according to a large new study of seniors living in Minnesota.

For the study, researchers at the Mayo Clinic looked at 1,929 men and women who ranged in age from 70 to 93. All had normal memory and thinking skills at the start of the study.

The researchers found that over the next four years those seniors who used the computer regularly—at least one to two times a week—had a 30 percent reduced risk of developing mild cognitive impairment, a form of brain decline that often precedes full-blown Alzheimer's, compared to their peers who were infrequent computer users.

Seniors who regularly did crafts, such as knitting or artwork, were 28 percent less likely to develop mild cognitive impairment compared to people who did not do these kinds of activities. Regular social engagement reduced the risk of memory problems by 23 percent, while playing games reduced the risk by 22 percent. The findings appeared in *JAMA Neurology*, a journal from the American Medical Association.





Walking May Slow Memory Decline of Early Alzheimer's

Taking regular, brisk walks may help to slow memory decline in people with early Alzheimer's, a new study suggests. The findings, from researchers at the University of Kansas, add to a growing body of research showing that exercise is good for the brain at any stage of life, even for seniors who already have Alzheimer's or other forms of dementia.

For the study, published in the journal *PLOS One*, the scientists studied 68 men and women, average age 73, in the early stages of Alzheimer's disease.

Half were enrolled in a rigorous, six-month exercise program that involved brisk walking and other aerobic activity. Volunteers completed at least 150 minutes of exercise a week.

The other half did stretching and toning exercises, including tai chi and yoga, but little aerobic activity, keeping their heart rates under 100 beats per minute.

At the end of six months, those in the exercise group could generally move and get around better. Their caregivers noted that they were more efficient in carrying out day-to-day activities like dressing and feeding themselves.

Memory tests and brain scans also revealed that those who got aerobic exercise also showed less decline in memory skills and less shrinkage in the hippocampus, a part of the brain critical for memory that is affected early in the course of Alzheimer's.



Alzheimer's Patients Often Stop Taking Their Medicines

Many people with Alzheimer's disease who start taking Aricept or other drugs for the condition fail to keep taking them or don't take the optimal dosage, a new study reports.

The study, in the *Journal of the American Geriatrics Society*, found that by 18 weeks of starting a new drug prescription for Alzheimer's, only about half of patients were still taking them.

"While these medications do not change the course of the disease, by not getting patients to target doses, we aren't optimizing the potential benefits these medications may provide," said study leader Noll Campbell of the Indiana University Center for Aging Research.

Just over half of all the participants stopped taking a drug because of a bothersome side effect. Common side effects included bone and muscle pain, muscle cramps, dizziness, headaches, digestive upset and nightmares. Some side effects may have been the result of interactions with other medications the people were taking.

Some patients also said they stopped taking their medicines because they cost too much.

"While these drugs aren't the answer to Alzheimer's disease, improving tolerability and adherence may reduce the complications of the disease," Dr. Campbell said.



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

The Value of Time

By Gary Joseph LeBlanc

Comic book writer and designer Will Eisner created the character “The Spirit,” who is known for saying, “Time is the most precious thing in the world.” If you should become a caregiver for someone with a terminal disease, you will truly understand the importance of these words.

A high percentage of the general public still doesn't realize that Alzheimer's and other dementia-related diseases are fatal. There are no Alzheimer's survivors, Lewy body dementia survivors, frontotemporal degeneration survivors; at least not yet.

Sadly, I frequently receive a barrage of e-mails, tweets, phone calls and comments from frustrated caregivers, relating that their family members refuse to visit these priceless and fading loved ones. The main reason? They say they can't stand seeing these people in the deteriorating condition in which they now find them. Very possibly, the caregivers are trying to preserve the memory of how these folks “used to be.” While understandable at some level, what caregivers fail to grasp is this: Every day that they refrain from visiting, the clock continues to tick-





tick-tick toward the midnight hour when these loved ones are removed from this mortal coil. The time wasted by uneasiness and embarrassment is time that can never be recovered.

Here are a few steps that may turn your visits around so that they are smoother and more enjoyable for all parties involved. Most of these concern the latter stages of the disease.

During your incredibly valuable visits, remember this: Questions are the root of all evil for dementia patients. The worst thing you can do is to start off the conversation with “Hi, do you remember me?” I don’t care if you’ve known a person for 50 years; always start off your visit by casually introducing yourself. By hitting these folks with questions right off the bat, you most definitely will raise their anxiety level, increase their confusion and, frankly, waste a lot of time. Allow them to connect with you visually before you even start a conversation.

Plan ahead. On your next visit, bring pictures that show your life together. This is a perfect way to build a conversation that both of you may enjoy. Or, if they

The time wasted by uneasiness and embarrassment is time that can never be recovered. Time is the most precious thing we have. Don’t waste it.

start telling stories that are completely off-base, just go with the flow. Do not correct them. Instead, enter their world.

Even after all the hardships I endured while caring for my dad, there’s hardly a day that goes by that I don’t wish that I could have had more time with him. Time is the most precious thing we have. Don’t waste it.

While they’re still in your life, take full advantage of every minute that you have with your patients or loved ones. Today it may be difficult, but it’s better than living with total regret tomorrow. ●

Note: This article originally appeared at the Fisher Center for Alzheimer’s Research Foundation’s caregiver blog at ALZinfo.org



Improving Sleep and Sundowning with Sunlight

By Margie Monin Dombrowski

Sleep rejuvenates the body and mind, and is essential to maintaining overall well-being. Because Alzheimer's negatively impacts the sleep/wake cycle, getting enough rest every day is especially important for those living with the disease.

But many people with Alzheimer's experience difficulty sleeping at night, frequent waking, wandering and "sundowning," or agitated behavior after the sun sets. These behaviors, along with sleep deficiency, can affect daytime functioning. Irregular sleep is a major reason why family members with Alzheimer's are moved to a residential living community.

Sleep aids and melatonin supplements haven't been proven to improve sleep for Alzheimer's patients who

experience sleep disturbances, but studies suggest that light therapy, or exposure to daytime sunlight, can reset circadian rhythms and positively affect the mood, sleep and daily functioning of those with Alzheimer's or related dementias.

"Evidence shows that exposure to bright morning sunlight can make a significant difference in the quality of life for those with memory impairment who are in a residential setting," says Kim Butrum, senior vice president for clinical services at Silverado, a senior living community in Irvine, Calif., that provides memory care, hospice care and in-home care. "Different studies have found it to resynchronize the sleep cycle and make improvements in depression, anxiety and behaviors such as agitation and pacing."

Three Ways to Stay Active

Staying physically and mentally active benefit your health and can reestablish a normal sleep cycle. The following tips can help.

- **Nature:** Spending time outdoors on short walks is one way to get exercise and sunlight. Gardening or tending to animals can enhance the outdoor experience.
- **Relaxation:** Stress relieving activities such as yoga, meditation and deep breathing can help you relax and get restorative sleep.
- **Dance:** Music and dance can boost brain activity, and the physical exertion and stress relief can ease sleep problems.

Through her involvement with studies conducted by the University of Southern California on the effects of light on Alzheimer's patients, Butrum has seen firsthand how light can affect behavior and mood. "Light could be a great non-pharmacological treatment to help improve mood and quality of life," she says.

While researchers hope to find a cure for Alzheimer's, there are ways to get your loved one's daily sleep patterns and activities back on track so that you can make the most of your time together each day.

The Effects of Sunlight

Researchers at the University of California, Davis and Rutgers University have found a link between low levels of vitamin D and memory problems and the onset of Alzheimer's. The effects of vitamin D supplements on Alzheimer's are still unknown, but direct exposure to natural light has many benefits.

"Low vitamin D levels have been risk factors for Alzheimer's disease," says Dr. Barry Jordan of Burke Rehabilitation Hospital in White Plains, N.Y. "Sunlight increases the amount of vitamin D that the body produces. Although there are multiple triggers for sundowning in people with Alzheimer's and other types of dementia, low light is one of them, and it may increase confusion and disorientation in those who are visually challenged."

People with dementia have an out-of-sync circadian rhythm, but being outside in the sunlight, especially in the morning when the sun is at its brightest, can help improve their functioning, make them more alert, lower their risk of falls and reset their body's internal clock.

"We know that older people that are inside all the time need at least 10 minutes of light a day," Butrum says. She says that the research has shown that light exposure can resynchronize the sleep-wake cycle for someone with a memory-impairing disease.

Lack of sunlight exposure can contribute to depression in the average person and even more so in someone with Alzheimer's.

"Although it does not change the disease, natural light elevates their mood and their ability to feel connected with the world," says Judy Berry, founder and CEO of Dementia Specialist Consulting, based outside of Minneapolis, Minn. "Emotions are affected by access to natural light. For seniors with dementia, depression affects how they relate to their symptoms and also their quality of life."

Getting Enough Rest

Healthy habits such as a routine daily schedule, sunlight exposure and stress reduction, as well as physical and mental exercise, can help people with Alzheimer's achieve a proper balance of activity and rest.

"Good sleep hygiene and getting enough hours of rest are important," says Dr. Jordan. "There are some studies that suggest that sleep improves the removal of amyloid in the brain and others that suggest stress will make Alzheimer's worse." Cortisol, the "stress hormone," is believed to contribute to developing Alzheimer's and memory loss.

"A consistent pattern of healthy sleep habits could make a difference in people who have disrupted sleep," Butrum says. "Go to sleep at the same time at night, get up early in the morning and go outside walking, or at least sitting outside on the patio."

Many people with Alzheimer's need to be engaged throughout the day in order to sleep well at night. Light exercise, cognitive activities and interacting with others can keep both body and mind alert.

"It's more about keeping people engaged than getting enough rest because people with dementia will tend to sleep a lot if someone isn't talking to them or keeping them active," says Berry. "They sleep during the day because there's nothing else to do and they're not going to sleep at night, which is difficult for caregivers."

Simple everyday activities—like donning coats and gloves, or riding a bus to an ice cream parlor or shopping mall—can keep them engaged, Berry says. "Even if it's for a few minutes and they're falling asleep again, it gives them that opportunity to get outside and participate in life. It does make a difference." ●

Creating Connections

Visual arts programming for people with Alzheimer's disease flourishes

By Karen Shugart

Whether encouraged through the aid of professional art therapists in museums or assisted by trained volunteers in homes or care facilities, therapeutic art can provide much-needed enrichment for people living with Alzheimer's disease.

Building on the success of the Museum of Modern Art in New York City's *Meet Me at MoMA* project that began in 2007, many museums have developed visual arts programs for people with Alzheimer's disease and related dementia. They have organized gallery viewings, studio times and even Alzheimer's cafes—all to stimulate creativity and encourage social connections among people with the disease, their caregivers and their communities.

In Tennessee, the Memphis Brooks Museum of Art last year began a partnership with nearby Christian Brothers University that lets art therapy students observe and work with participants from a local day program. Art therapist Sarah Hamil says students supported the participants and their work, which included spending time in a gallery and studio, and publicly exhibiting their art.

Art Therapy at Home: A Resource

For caregivers who are searching for a way to bring arts enrichment home, the National Center for Creative Aging's Creative Caregiving Guide (creativecaregiving.creativeaging.org) is a free resource that offers tutorials for family and professional caregivers.

"You can customize it to your care partner," says Elizabeth Lokon, founder and director of Opening Minds through Art, who contributed to the guide. "The beauty of this creative caregiving guide is it's meant to be used one-on-one."

One participant, she recalls, held her daughter's hand in the gallery and pulled the younger woman straight to her painting. The participant had limited verbalization and significant memory loss, yet weeks after creating her artwork she could pick it out from the dozens of works on the walls. "The daughter just broke into tears and said, 'Thank you for giving me my mother back,'" Hamil says. "[The mother] was so proud she could show that to her daughter."

In Seattle, the Frye Art Museum has built a slate of creative offerings for people with memory loss. In addition to gallery tours and art-making classes, the museum has a monthly Alzheimer's café, where people can socialize over food and music after a gallery discussion.

The Frye also created *Bridges*, which brings a specially trained teaching artist into the homes and care facilities of people living with more advanced dementia. It was a way to reach those unable to make it to the museum, says Mary Jane Knecht, manager of creative aging programs. "We're very committed to our programs at the museum being relevant in the community," Knecht says.

An analysis of Frye's *here:now* tour and studio program, published in the March 2015 *Dementia: The International Journal of Social Research and Practice*, found that the program was well received by participants and care partners. Indeed, much research supports the validity of therapeutic art.

"Art really helps people with dementia where they're at," says Paige Scheinberg, an art therapist who works with the Brooks Museum. "Within a session, I'll often absolutely see a change in affect—the way they express themselves nonverbally. Are they smiling more? Are their expressions changing? They'll establish eye contact more. As the group progresses and they engage with the art, I'll see that sense of anxiety or depression lift and there's definitely a higher sense of engagement. With consistency, I think



that we can begin to see some changes for the people who participate in other areas in their life.”

One reason is likely the safe, nonjudgmental atmosphere, says Brittany Halberstadt, education assistant for the *Reflections* program at the Nasher Museum of Art at Duke University in Durham, N.C.

“If you’re with a group of others who know what dementia is like and know what caring for someone with dementia is like, you don’t have to worry about those long pauses,” Halberstadt says.

The Nasher Museum in June held a symposium that drew more than 70 museum professionals from 23 states and three countries to discuss best practices in programming for visitors with memory loss. In April, the museum expanded its program to include public tours. Groups and individuals, along with their caregivers, can sign up for the tours, which can include guided discussions, hands-on art activities and live musical performances.

While many care facilities arrange museum trips, others offer on-site art expression and therapeutic art activities. The Cape Cod Museum

of Art in Massachusetts regularly brings its art & conversation programs to assisted living facilities in bordering towns, says Benton Jones, education and outreach coordinator. Trained art educators facilitate discussions using reproductions from the museum’s collection. “We have conversations where there’s really no wrong answer, but it’s really a way of getting participants engaged and helping them make links to memories,” Jones says. ●

The Power of Art Therapy

Written by Kent Karosen, President and CEO of the Fisher Center for Alzheimer’s Research Foundation, and co-author Chana Stiefel, “Why Can’t Grandma Remember My Name?” features the artwork of children alongside that of adults with Alzheimer’s disease. The book is available through the Fisher Center Foundation at www.ALZinfo.org/book.

Fisher Center Scientists Announce Two More Discoveries

By Sam Gaines

Led by Nobel Laureate Dr. Paul Greengard, scientists at the Fisher Center for Alzheimer's Research at The Rockefeller University in New York published two breakthrough studies recently. The studies shed light on the role a protein called Presenilin 1 (PS1) plays in creating the sticky brain plaques that characterize Alzheimer's disease.

These findings point the way for possible therapeutic approaches to treating Alzheimer's disease more effectively. Alzheimer's disease has no cure, and current treatments can only lessen symptoms for a limited time.

PS1, a core component of an enzyme called gamma-secretase, is one of the chief components involved in the buildup of beta-amyloid, the toxic protein that clumps together to form brain plaques. Scientists already understood that PS1 is an important part of this process, and that it is a multistep process that starts with a long protein, amyloid precursor protein (APP). An enzyme called beta-secretase cleaves APP to form a smaller protein, beta-C-terminal fragment (beta-CTF). PS1 cuts this smaller protein into even smaller pieces, creating the sticky protein known as beta-amyloid in the process.

What Fisher Center scientists uncovered were some of the specific factors that control PS1. In the first study, they identified a specific site on PS1, called Ser367. Targeting this site, the scientists found, could make a huge difference in the production of beta-amyloid. A process called phosphorylation significantly decreased the amount of beta-amyloid produced.

"Phosphorylation is a chemical modification that is very common in many different proteins," says Dr. Victor Bustos, a scientist at the Fisher Center for Alzheimer's Research who served as lead researcher in both studies. "Phosphorylation is done by a special type of enzyme called protein kinase. This means a phosphate is added to a protein. It's put in by a protein kinase, and it's taken out by a protein phosphatase."

Fisher Center scientists also pinpointed the specific enzyme responsible for the phosphorylation process. By inhibiting this enzyme, they were able to dampen

the phosphorylation process, which led to higher levels of beta-amyloid.

"There have been thousands of studies done on Presenilin 1 in the past," says Dr. Bustos. "What we showed is the particular way in which Presenilin 1 is involved in the formation and destruction of beta-amyloid."

"There have been thousands of studies done on Presenilin 1 in the past. What we showed is the particular way in which Presenilin 1 is involved in the formation and destruction of beta-amyloid."

—Dr. Victor Bustos



Dr. Victor Bustos

“The phosphorylation process acts as a kind of ‘on’ and ‘off’ switch, setting off a cascade of events that leads to more or less beta-amyloid produced. We show that phosphorylation of PS1 at Ser367 does not affect gamma-secretase activity, but has a dramatic effect on beta-amyloid levels.”

—Dr. Marc Flajolet

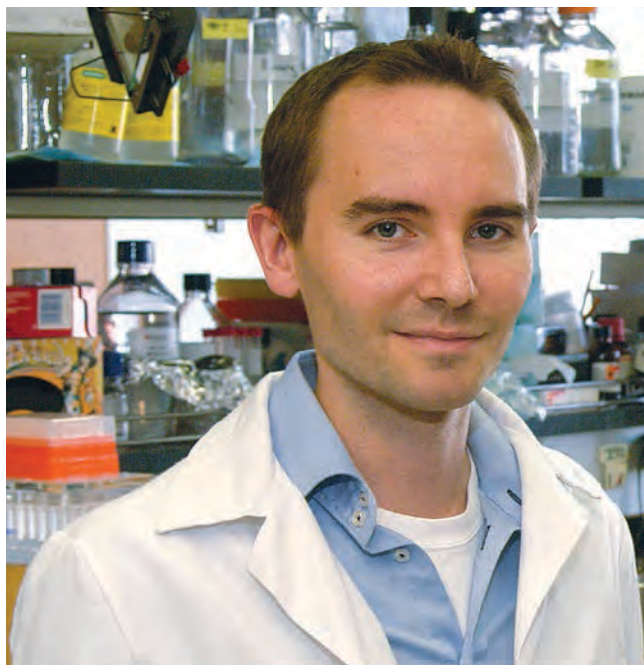
“The phosphorylation process acts as a kind of ‘on’ and ‘off’ switch, setting off a cascade of events that leads to more or less beta-amyloid produced,” says Dr. Marc Flajolet, one of the authors in both studies and Research Assistant Professor at the Fisher Center. “We show that phosphorylation of PS1 at Ser367 does not affect gamma-secretase activity, but has a dramatic effect on beta-amyloid levels.”

Along with these discoveries, the Fisher Center scientists identified a gene mutation that also affects the phosphorylation process. Studies in mice that had been bred to develop a disease similar to Alzheimer’s showed that this mutation led to dramatic increases in levels of beta-amyloid and beta-CTF. They found that the mutation also diminished the cell’s ability to break down beta-CTF, which also led to higher levels of plaque in the mice brains.

“We are very excited by these new developments and are more committed than ever to prevent the onslaught of this disease. The Foundation is extremely proud to be funding Drs. Greengard, Bustos and Flajolet and their colleagues.”

—Kent Karosen, President and CEO

In the second study, a team of researchers from the Fisher Center and Yale University observed how PS1 regulates the breakdown of APP. When PS1 was phosphorylated at the Ser367 site, it caused the



Dr. Marc Flajolet

cell to “eat” the excess beta-CTF, a natural cell-cleaning process called autophagy. “This previously unrecognized mechanism of regulation of beta-amyloid by Presenilin 1 could provide an attractive target for potential Alzheimer’s disease therapies,” Fisher Center scientists wrote.

A drug that targets this process could significantly lower levels of beta-amyloid, which in turn would lower the amount of buildup of plaques. Other steps in the process could also be targeted by novel treatments. “Drugs designed to increase the level of PS1 phosphorylated at Ser367 should be useful in the treatment of Alzheimer’s disease,” Fisher Center scientists concluded.

“We are very excited by these new developments and are more committed than ever to prevent the onslaught of this disease,” says Kent Karosen, President and CEO of the Fisher Center for Alzheimer’s Research Foundation. “The Foundation is extremely proud to be funding Drs. Greengard, Bustos and Flajolet and their colleagues.”

The studies were published in the *Proceedings of the National Academy of Sciences*. They were funded by the Fisher Center for Alzheimer’s Disease Foundation and by the National Institutes of Health. ●

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Bathing Alzheimer's Patients—

TIPS AND TECHNIQUES

By Selby Bateman

Carole Larkin, a geriatric care manager for ThirdAge Services, knows that many caregivers want to “pull their hair out” when giving baths to Alzheimer's patients. While some people with Alzheimer's disease don't mind bathing, it can be a frightening, confusing experience for others. But there are certain strategies caregivers can use to minimize frustration for both patient and caregiver.

“Doctors recommend older adults shower or bathe a minimum of twice a week to reduce the chance of infection, especially urinary tract infections in women,” says Larkin, who trains caregivers in home care companies, nursing homes and memory care communities. “If you can get them to bathe more, kudos to you. If not, be satisfied with twice a week, unless another medical condition demands more frequent bathing.”

Larkin offers these tips to help caregivers overcome the ordeals of bathing:

- Make it seem as if the request is just a routine part of daily life as in, “It's Tuesday morning. We always take our bath on Tuesday morning. Let's go get cleaned up, and then I'll make you a nice breakfast.”
- Follow up on the positive reinforcements so that your loved one gets rewarded for complying. Doing this as part of a regular routine ingrains the behavior you want replicated. It might take some practice, but it can be done. Always praise and compliment them after the bathing is done.
- If there is no other way to get them to bathe, ask their doctor to write on a prescription pad something like: “Mr. So-and-So needs to bathe two times a week for infection control.” Make several copies of the prescription (in case they tear it up). Show the prescription to them and say, “Doctor's orders.”



- Some people are extremely modest. Be aware that this may be their reason for saying “NO.” Respect their dignity by allowing them to cover up with something while in the shower. Perhaps a towel or a sheet or even a poncho. Just wash under whatever they use to cover up.

Caregivers should involve the patient in the bathing process. Larkin suggests that caregivers have the patient try to wash themselves first, no matter how well they do. That gives them ownership of the task and something they can succeed at.

“If they can do a credible job on their own with just reminders from you to wash here and there, let them do that,” she says. “Even if all they can do is hold a washcloth while you do everything else, let them do that. At least they are participating in the task as much as they can.”

The same goes for hair washing and drying.

“Allow them to do as much as they can, even if you have to go back over what they have done,” she says.

Above all else, caregivers must remember that safety comes first. “There need to be grab bars positioned for them to hold onto, while getting in and while bathing,” she says. “And there need to be appliquéés on the shower or tub floor to give them traction under their feet.”

If the patient is unsteady on his or her feet, caregivers should feel free to use a shower chair. Not only can it help calm a fearful patient, the chair gives the caregiver a steady place for the patient to sit while being washed.

See some of Larkin’s other ideas and tips about Alzheimer’s caregiving at www.alzheimersreadingroom.com. ●

“Doctors recommend older adults shower or bathe a minimum of twice a week to reduce the chance of infection, including urinary tract infection.”

—Carole Larkin, Certified Dementia Consultant, ThirdAge Services

Planning Ahead for a Better Bath

The National Institute on Aging (NIA) suggests that advance planning can help make bath time better for both the caregiver and the Alzheimer’s patient:

- Plan the bath or shower for the time of day when the person is most calm and agreeable. Be consistent. Try to develop a routine.
- Respect the fact that bathing is scary and uncomfortable for some people with Alzheimer’s. Be gentle and respectful. Be patient and calm.
- Tell the person what you are going to do, step by step, and allow him or her to do as much as possible.
- Prepare in advance. Make sure you have everything you need ready and in the bathroom before beginning. Draw the bath ahead of time.
- Be sensitive to the temperature. Warm up the room beforehand, if necessary, and keep extra towels and a robe nearby. Test the water temperature before beginning the bath or shower.
- Minimize safety risks by using a handheld showerhead, shower bench, grab bars and nonskid bath mats. Never leave the person alone in the bath or shower.
- Try a sponge bath. Bathing may not be necessary every day. A sponge bath can be effective between showers or baths.



Fighting for Funds

Congressman Tom Cole makes Alzheimer's research a national priority



Photo: Courtesy Congressman Tom Cole

Congressman Tom Cole (R-Okla.), an eight-term member of the U.S. House of Representatives and the Chairman of the House Appropriations Committee's Subcommittee on Labor, Health and Human Services, Education and Related Agencies, is one of the federal government's most prominent leaders on Alzheimer's disease research and healthcare funding. Rep. Cole recently spoke with Fisher Center for Alzheimer's Research Foundation President and CEO Kent Karosen and Managing Editor Sam Gaines about his family's history with the disease and our nation's ongoing search for better treatments and a cure.

Time Magazine once called Rep. Tom Cole "one of the sharpest minds in the House." It's no surprise, then, that he has spearheaded the House's appropriations priorities for increased funding for Alzheimer's disease research. Rep. Cole's appropriations bill for 2015 included a \$300 million increase in Alzheimer's research funding through the National Institutes of Health (NIH). He has also been vocal in his opposition to President Trump's proposed budget cuts to the NIH, the largest public funder of scientific research in the U.S. In 2017, Cole and his Senate colleague, Roy Blunt (R-Mo.), led the fight against Trump's proposed \$1.2 billion cut to the NIH, instead increasing the agency's budget by \$2 billion,

or 6 percent of the agency's total budget, for the second year in a row.

A fifth-generation native of Oklahoma and an enrolled member of the Chickasaw Nation, Cole is one of only two Native Americans currently serving in Congress. Cole's late father, John, was a career U.S. Air Force master sergeant, serving 20 years and then working an additional two decades as a civilian federal employee at Tinker Air Force Base in Midwest City, Okla. Cole's late mother, Helen, had a distinguished career of her own: She served as a state representative, state senator and mayor of Moore, Okla.

In 1984, Cole and his family learned that his father had Alzheimer's disease. That experience had a powerful impact on the congressman.

We spoke with the Congressman about his family's experience with Alzheimer's and the vitally important subjects of funding for caregiving and continued research into the disease.

Preserving Your Memory: What are some of your fondest memories of your father?

Rep. Tom Cole: He was a great dad. I love to say that everyone should have an NCO (non-commissioned officer) as a father. He was strict and disciplined in a way that a good master sergeant should be. We were OU (Oklahoma University) football fanatics. He took me to my first OU football game, back when Bud Wilkinson was coaching. We were of limited means and couldn't afford season tickets, but somehow he always managed to hustle a couple of tickets and get us in. I remember one time, in 1962, we were playing Missouri for the Big Eight Championship, and we didn't have tickets. We were standing out in the



Photo: Courtesy Congressman Tom Cole

The Cole family

rain. Some guy spotted us and offered us two tickets that were supposed to be for his friends, but they didn't show. I was 12 years old at the time. My father provided wonderful support. He did everything he knew to help his kids and helped us secure everything we needed as a family.

PYM: When did your family discover that your father had Alzheimer's disease?

TC: We knew something was wrong in 1982. He had retired, and the last year he was working—he was a skilled mechanic—something was just not right. By 1984 we had a diagnosis. He was able to stay at home at first. Over time, though, it was increasingly

difficult for my mom to provide care as his condition deteriorated.

The saddest day of my life was when my brother and I did a family intervention and told my mom, you just can't do this any longer. We took him to a veterans' center in Ardmore, Okla., about 100 miles away. He was in two different veterans' center for the last 12 years. He didn't know any of us the last 11 years of his life.

PYM: How involved were you and your family in his care?

TC: We were extremely involved. My mom was the sole caregiver, and the family was supportive. She was a state senator at the time and gave that up to be his caregiver. Later, when he was institutionalized, she ran again and won. Once he was institutionalized, we were down there all the time. Friends, family and neighbors all helped—an informal support system we didn't know we had until we needed it.

PYM: What words of wisdom would you offer to someone who has just learned that a loved one has Alzheimer's?

TC: First of all, we now understand a lot more about it. Support networks are there, so don't be shy about asking for help. And know that your government is trying to do something about this, which is a national priority. We've dramatically increased funding over the past three years. Help is on the way.

I remember the first time we proposed a major increase in funding in 2015, and we got a letter from a lady in Texas whose husband had just been diagnosed with Alzheimer's. She said she felt so alone. It was precisely the same position my mother found herself in, also after roughly 40 years of marriage.

There is no easy answer, but there is support and we are focused on this and



Tom Cole and his mother, Helen.

Photo: Courtesy Congressman Tom Cole

are putting more money toward it. We had 28% more proposals for NIH research into Alzheimer's last year. A sustained effort over time will make a big difference as we continue this initiative to find a cure.

The human dimensions alone are enough to justify the investment. Most people are startled to learn that we spend \$259 billion a year in Medicaid, and that will rise to more than \$1 trillion by 2050, just given the increasing longevity of the population. It will bankrupt the country if we don't get ahead of it. We must make this investment—it's the right thing to do for the people of our nation.

**"I really credit the people who've been involved in this field a long time—there's so much awareness around the disease at this point. Members on both sides of the aisle want to be involved in this. They both see the wisdom of the research and understand the human toll of the disease."
—U.S. Rep. Tom Cole**

PYM: You are a leading voice in Congress for Alzheimer's research funding. How are we doing as a nation on that front at this point?

TC: We're actually doing quite well. I really credit the people who've been involved in this field a long time—there's so much awareness around the disease at this point. Members on both sides of the aisle want to be involved in this. They both see the wisdom of the research and understand the human toll of the disease. We just needed to stay focused, and I can't say enough about Sen. Roy Blunt, my counterpart, who's been a leader on this front as well. Fate put us in the same position at exactly the same time. We both understood the importance of engaging NIH in this fight.

PYM: Our nation's population is aging rapidly. As this trend continues, how will it impact the urgency

of finding more effective treatments and maybe even a cure?

TC: It absolutely exacerbates every problem we have. We didn't really see an expanded life expectancy until the last generation or so. But we're living longer now, so Alzheimer's disease is a growing problem.

This is one issue where if we don't get ahead of it, it will destroy our federal budget. Hopefully we'll find a cure, but even slowing the progression of the disease would be a major step.

Alzheimer's disease is the only major disease we don't have a cure for. Even with cancer, there is tremendous hope for survival. About 65% of cancer patients overcome the disease. We need the same sort of impact here, in our fight against Alzheimer's. This disease is even more expensive to treat and provide care for than cancer is.

PYM: What more do we need to be doing as a nation to find better treatments and, hopefully, a cure?

TC: I think we need to keep at it. What always worries me about these things is that you can have a one-hit wonder—one good year in appropriations, and then the focus is gone. We need a sustained investment at this time and on into the future. So, the process of educating members of Congress about the importance of that is very important.

There are tremendous things happening in private philanthropy in this area, but we need to maintain and advance our federal support, as well. We've reached critical mass between private research and public investment, for the benefit of our people and all humanity, really. This is a major global problem, particularly as life spans continue to increase. We've got the resources and intellectual capacity. America can be a global leader here, so we can make a big difference in our country and around the world.

We need to stay at it and find better ways to treat patients, and, of course, a cure for all who suffer from this disease. ●



What are some of your fondest memories of your father? Share them on our Facebook page at facebook.com/ALZResearch/.

BALANCING ACT

By Jennifer Sellers

Balance exercises can help those with dementia reduce their likelihood of falls, maintain their independence longer and improve their quality of life.

Whether the person you're caring for is someone who can still engage in many of the activities of daily living or someone who needs regular assistance, improved balance has multiple benefits. It can make physical activities easier, and it can decrease falls and related injuries, such as hip fractures. Exercise can also improve sleep, which can help the person be more alert and sure-footed during the day.

Research Shows Benefits

A recent study published in the *Journal of the American Geriatrics Society* found that high-intensity functional exercises can improve balance in those with dementia and reduce their dependence on caregivers for certain activities. In the study, participants exercised for 45 minutes, two to three times per week. The exercises focused on improving leg strength, walking and balance.

Exercise can also help those with more advanced dementia. Finnish researchers studied the impact of exercise in patients with Alzheimer's disease and found that those in exercise groups had significantly fewer falls than those in other groups. This is a significant benefit, considering people with Alzheimer's are three times more likely to suffer from fall-related hip fractures than seniors without the disease.

Because dementia is progressive, no exercise program can help maintain independence indefinitely. While people with non-Alzheimer's-related dementia seem to



benefit more from exercise than those with the disease, exercise can still slow the deterioration of balance in most people with any type of dementia.

Getting Started

It may be helpful to find a trainer or physical therapist who specializes in exercises for the elderly. A local senior center can be a good resource for finding an exercise professional. Many centers also offer on-site classes. Exercises can be done at home, just make sure you follow basic safety precautions:

- Get a doctor's approval
- Keep the exercise area clear of furniture and clutter
- Practice warm-ups and cool-downs
- Ensure the person has something or someone to hold onto
- Use no-skid mats

If you do the exercises at home, ask your doctor or physical therapist to recommend different exercises. You can also find videos and exercise guides through the National Institute on Aging at <https://www.nia.nih.gov/health/publication/exercise>. ●

Try This: Heel-to-Toe Walk

1. Position the heel of one foot just in front of the toes of the other foot. Your heel and toes should touch or almost touch.
2. Choose a spot ahead of you and focus on it to keep you steady as you walk.
3. Take a step. Put your heel just in front of the toe of your other foot.
4. Repeat for 20 steps.

Source: National Institute on Aging



The Fruits of Summer

Why eating fruit is good for your body and mind

By Jason Schneider

There are few things as refreshing—and healthy—as fruit. Whether enjoyed alone, combined in a salad or frozen in a smoothie, fruit is a delicious choice that can be good for your body—and mind.

“Fruits are low in calories, fat and sodium,” says Dixie Yow, a clinical research dietitian at Wake Forest Baptist Medical Center in Winston-Salem, N.C.

Packed with Nutrition

Fruits are high in nutrients such as potassium, vitamin C, folic acid, fiber and antioxidants. All fruits are cholesterol-free.

“Diets rich in fruit have been shown to reduce risk for many chronic diseases such as heart disease, hypertension, type 2 diabetes and certain cancers, and may even have been linked to improved cognitive health,” Yow says.

Delicious Daily Servings

Some researchers believe that certain fruits may help improve memory.

“It is believed that berries, cherries, plums, red grapes, citrus fruits and avocados contain the best brain-boosting antioxidants,” Yow says. But no single fruit is going to give you all of the nutrients you need for your best health. Yow recommends eating at least three servings of fruit daily from all colors of the rainbow, since each color has its own health benefits.

Try incorporating several different kinds of fruit in a fruit salad—it’s a great way to get your daily serving. The United States Department of Agriculture recommends women 31 years and older eat 1 1/2 cups of fruit per day, and men age 31 and over eat 2 cups of fruit per day.

Enjoy Summer Year-Round

While fresh fruit is usually the best choice, frozen fruits and berries can be just as healthy. “I recommend buying fresh fruit only when it is in season,” says Yow. When it’s out of season, Yow suggests opting for frozen fruit, which is frozen and packaged immediately after harvesting and maintains all of the nutritional benefits. It’s also cheaper.

Nutrients Found in Fruit

Potassium

- Helps maintain healthy blood pressure
- Found in bananas, prunes, dried peaches and apricots, cantaloupe, honeydew

Dietary fiber

- Reduces cholesterol levels, helps bowel function
- Found in whole or cut-up fruits; not in fruit juice

Vitamin C

- Growth and repair of body tissues, healthy teeth and gums

Folate

- Helps form red blood cells

Source: www.choosemyplate.gov



Most dried fruit has the same amount of sugar and calories, but can lose some of its vitamins and other nutrients during the dehydration process, Yow says. Some dried fruit might also often have added sugar. ●

See *Summer Fruit Salad recipe* and “*Superfruits*” information, page 30.



Scam Prevention

By Tamekia Reece

Edited by Bernard A. Krooks, JD, CPA, LL.M, CELA

Senior citizens are one of the most targeted groups for scammers. A survey by True Link Financial found that seniors lose an average of \$36 billion to financial abuse each year. People with Alzheimer's can be especially attractive targets since they may be easily confused and have trouble recalling conversations and information. From fake sweepstakes and lotteries to bogus charities and home repair scams, unscrupulous people are working hard to get money or financial data from victims. Take these steps to protect your loved one.

Have a Conversation

If your family member is still in the early stages of Alzheimer's and understands, warn him about potential scams. "Explain there are bad people who may try to sell him something over the phone, request money by mail, pretend to be with the IRS, or even approach him on the street," says Elizabeth Loewy, former chief of the Elder Abuse Unit in the Manhattan District Attorney's Office and current general counsel for EverSafe, a technology service that works to protect seniors from fraud and identity theft. Let him know he should always talk to a family member or other trusted person if something seems fishy or he feels he's being pressured, she says.

Keep an Eye on Finances

One of the best ways to protect your loved one is to have a Durable Power of Attorney (DPOA), someone entrusted to manage all of the senior's financial affairs, says Steven J.J. Weisman, an elder law attorney and author of *Identity Theft Alert*. If your relative doesn't already have a DPOA in place, discuss it with her. "The downside of a DPOA is if the senior is still competent, she maintains the power to deal with her own financial assets and can be tricked by scammers," Weisman says. In that case, be on alert and try to intervene immediately if something doesn't seem right. If your relative doesn't have the capacity to choose a DPOA, a court-appointed conservator or guardian can handle financial matters.

Stop the Calls

Place your loved one's telephone numbers on the National "Do Not Call" registry (www.donotcall.gov). Also, check to see if your state has its own Do Not Call list. While this won't eliminate all unwanted calls, it will reduce the number of unsolicited telemarketing calls, which means there's less of a chance for her to be conned out of money or information.

Use Technology

A number of services make monitoring for suspicious activity easier. If your loved one has the capacity, he can sign himself up and have alerts sent to a trusted person. Otherwise, you will need a DPOA, guardianship or conservatorship to keep an eye on his finances. At EverSafe, the service learns what's normal for the person (by downloading the past 90 days of activity). "Then it sends an alert by email, text or phone to the designated contact person if anything unusual occurs, like the opening of a new account, changes in spending, missing deposits (Social Security, pension, etc.) and more," Loewy says. Because the alerts happen within a day, it allows you to nip any fraud in the bud before the person's lifetime savings have been depleted, she adds.

Check the Mail

Have mail forwarded to a post office box and weed out unsolicited marketing and requests for money. In addition, opt out of some direct mail marketing by registering the person's address on the Do Not Contact List at the Data & Marketing Association's consumer website (www.DMAChoice.org).

Be Aware of New Friends

If you hear your loved one mentioning a name you've never heard, or notice a neighbor or new "friend" hanging around, investigate. Don't feel bad for asking questions or even looking into the person's background. It's better to ruffle a few feathers than find out the hard (and expensive) way that the person was up to no good.





Screen Helpers

Unfortunately, many cases of financial abuse are committed by people chosen to care for the victim. Make sure any agency you use to find a caregiver is reputable and does background checks. If you do the hiring yourself, conduct background screenings and check references. Even if a relative handles caregiving duties, have a quick monthly meeting between him or her and another trustworthy family member (or group of family members) to go over the person's finances. Don't forget to also check out any other people who come in regular contact with your loved one, like housekeepers, maintenance workers, home health aides and others.

Protect the Home Front

A neglected yard or house exterior in need of repair can be signs that an older (or physically incapacitated) person lives at the home. Scammers may take advantage of that, offering to complete services that are either unnecessary, shoddy, never performed or overpriced. Worse, a con artist might use this opportunity to get inside the home to steal money, belongings or financial information. Keep the person's home well maintained. If you don't live nearby and can't visit often, ask the caregiver or a trusted neighbor to keep you updated on the condition of the home. ●

If Your Loved One is a Victim of a Scam ...

- React immediately. Before going for the big score, scammers will often conduct a series of small transactions to test the vulnerability of a person's bank account, says Elizabeth Loewy, general counsel at Eversafe. "If you're able to shut it down quickly, it's far less likely they will be able to wipe out the entire life savings," she says.
- Contact the financial institution. Report the incident to the bank or creditor. It may need to put a freeze on the account or issue a new card.
- Reach out to credit bureaus. If you believe your relative's identity has been compromised, contact any of the major credit bureaus (TransUnion, Equifax and Experian) to place a fraud alert on the account. The company will notify the other two bureaus.
- Inform law enforcement. File a report with law enforcement. They don't always catch the scammers, but sometimes they do.

Source: www.scamicide.com

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 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

Can you identify these stars by matching them to their birth names?

- | | |
|-------------------------|--------------------------|
| 1. ___ Charlie Sheen | a. Eric Marlon Bishop |
| 2. ___ John Wayne | b. Maurice Micklewhite |
| 3. ___ Alan Alda | c. Allan Konigsberg |
| 4. ___ Michael Caine | d. Marion Morrison |
| 5. ___ Lauren Bacall | e. Reginald Dwight |
| 6. ___ Woody Allen | f. Carlos Estevez |
| 7. ___ Portia de Rossi | g. Laszlo Lowenstein |
| 8. ___ Marilyn Monroe | h. Betty Joan Perske |
| 9. ___ Jamie Foxx | i. Alphonso D’Abruzzo |
| 10. ___ Whoopi Goldberg | j. Amanda Lee Rogers |
| 11. ___ Elton John | k. Caryn Johnson |
| 12. ___ Peter Lorre | l. Norma Jeane Mortenson |

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 humorous observation. The black squares are the spaces between words. One letter has been dropped in place to start you off.

I	I	G	A	O	I	L	H	S	Y	O	O	H	G	E	R
O	C	E	S	L	M	T	V	E	S	O	T	F	T	R	T
R	N	H	T	R	D	N	E	E		F	A	S	E	W	H
	E	N				O	E			U				E	
R															

LEAPFROG

Here’s a list of U.S. colleges and universities — one two-word school for each number. Their letters are in the correct order, but they overlap. All you have to do to find the schools is separate the letters.

Example: NODATMREE — NOTRE DAME

- | | |
|------------------|-------|
| 1. FOWRAEKSTE | _____ |
| 2. GEMOARSOGEN | _____ |
| 3. BYRIOGUHANGM | _____ |
| 4. HOJOPHKINNSS | _____ |
| 5. HMOOLUYONKET | _____ |
| 6. DOOMLINDION | _____ |
| 7. TVIERGICNHIA | _____ |
| 8. SLAWARRAENCHE | _____ |
| 9. BMARYWRN | _____ |

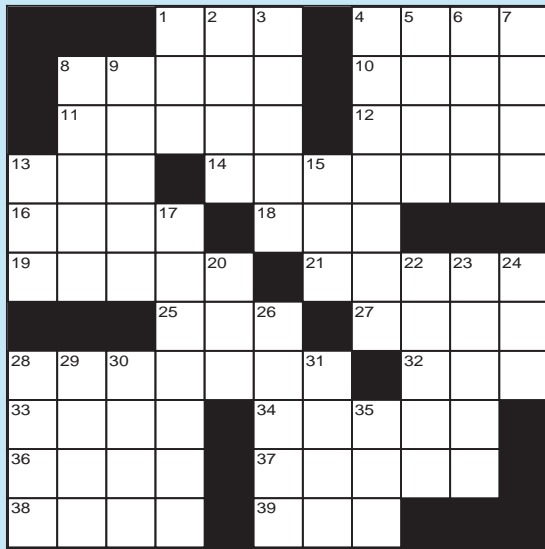
•VISIT US AT KAPPAPUZZLES.COM•



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 also a thematic puzzle: the title "It's All Good" is a hint. Have fun testing your knowledge while doing something that's good for you!



Across

- | | | |
|---------------------------------|-----------------------|------------------------------------|
| 1. Campers' vehicles (abbr.) | 32. "___ and Stimpny" | 7. Layers |
| 4. Crawl | 33. Tighten a spring | 8. Singer Shore |
| 8. Card with two spots | 34. Zodiac sign | 9. Follow |
| 10. Dracula's garb | 36. Chip in | 13. Proofs of age (abbr.) |
| 11. Sluggish | 37. Portions (out) | 15. ___ a plea |
| 12. "___ Ordinary Man" (2 wds.) | 38. Boxing | 17. Flaxen-haired outcomes (abbr.) |
| 13. Officeholders | 39. Football | 20. Young fellow |
| 14. Attainment of wealth | | 22. Blender button |
| 16. Smear | | 23. ___ pass |
| 18. Warsaw's country (abbr.) | | 24. Strong desire |
| 19. Husk | | 1. Wish undone |
| 21. Full of energy | | 2. They came |
| 25. Dunderhead | | 26. Like lather |
| 27. Confident | | 28. Wallop |
| 28. "The ___ Music" (2 wds.) | | 29. Sty sound |
| | | 30. Biblical |
| | | 3. Arrange (2 wds.) |
| | | 4. Sparklers on a |
| | | 5. Title |
| | | 6. Accountants' initials |
| | | 31. Ginger's partner |
| | | 35. "___ Magic" |

Down

- | | |
|--------------------------|--------------------------|
| 1. Wish undone | 26. Like lather |
| 2. They came | 28. Wallop |
| 3. Arrange (2 wds.) | 29. Sty sound |
| 4. Sparklers on a | 30. Biblical |
| 5. Title | 3. Arrange (2 wds.) |
| 6. Accountants' initials | 4. Sparklers on a |
| | 5. Title |
| | 6. Accountants' initials |
| | 31. Ginger's partner |
| | 35. "___ Magic" |

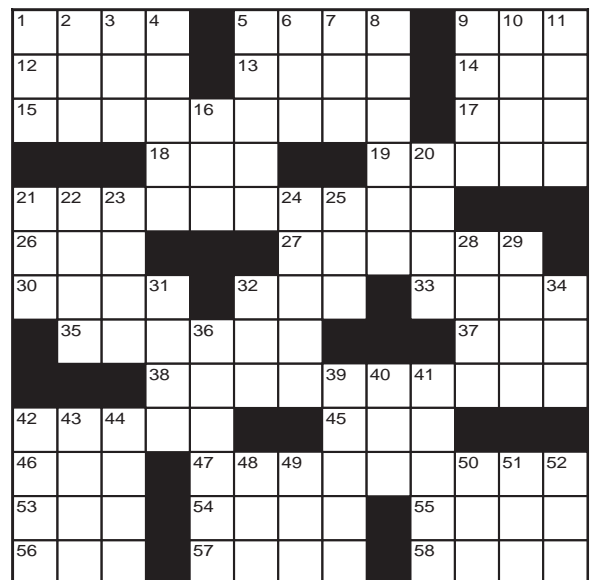
It's All Good

Across

- | | | |
|---------------------------------------|-----------------------|---------------------------------------|
| 1. Stage drama | 46. "All About ___" | 24. Grating |
| 5. Howl | 47. GOOD ___ | 25. AOL, e.g. |
| 9. Police abbr. | 53. Sick-bed beverage | 28. Went by bus |
| 12. Mother: Fr. | 54. Hand out hands | 29. Fed. agents |
| 13. Farming prefix | 55. Pass | 31. Putt successfully |
| 14. ___ G. Carroll ("Topper" actor) | 56. Slip up | 32. "Brokeback Mountain" director Lee |
| 15. GOOD ___ | 57. Pitch | 34. Dazzle |
| 17. Olympus and Olympia: abbr. | 58. Huge work | 36. Saudi capital |
| 18. Dweller: abbr. | | 39. Immune system soldier |
| 19. Slackens | | 40. Where Tel Aviv is: abbr. |
| 21. GOOD ___ | | 41. Scope |
| 26. First stock sale: abbr. | | 42. Head, to Mimi |
| 27. Allege | | 43. Allege |
| 30. She was pursued by Sportin' Life | | 44. Shakespearean king |
| 32. "Earth Forms" sculptor | | 48. Fire, in France |
| 33. The Eternal City, to its citizens | | 49. Asphalt |
| 35. Some terriers | | 50. "Alley ___" |
| 37. Lawn moisture | | 51. ___-Wan Kenobi ("Star Wars") |
| 38. "GOOD___" | | 52. Times Square site: abbr. |
| 42. Dialogue-heavy, as a show | | |
| 45. Civil War side: abbr. | | |

Down

- | | |
|--|----------------------------------|
| 1. Brit. VIPs | 40. Where Tel Aviv is: abbr. |
| 2. Grassy meadow | 41. Scope |
| 3. Upper limb | 42. Head, to Mimi |
| 4. Long | 43. Allege |
| 5. Dieter's focus | 44. Shakespearean king |
| 6. FBI employee: abbr. | 48. Fire, in France |
| 7. Retiree's acct. | 49. Asphalt |
| 8. Tablecloths | 50. "Alley ___" |
| 9. Donations | 51. ___-Wan Kenobi ("Star Wars") |
| 10. 1995 U.S. Open champ Sampras | 52. Times Square site: abbr. |
| 11. Top banana | |
| 16. Olden car | |
| 20. Ripening factor | |
| 21. Bend the truth | |
| 22. Oil org. | |
| 23. Parks of the civil rights movement | |



BRAIN-BOOSTING PUZZLES

HIDDEN-MESSAGE WORD-FIND™

After you have located and circled in the diagram all of the words in the Word List below, read the leftover (unused) letters from left to right, line by line, to reveal the end of a quip that begins "Real luxury is..." The words are found in the diagram reading forward, backward, up, down, and diagonally, and always in a straight line.

You are looking for a 51-letter phrase.

- BUTLER NANNY
- CHAMPAGNE ORIENTAL RUGS
- CHAUFFEUR PERSONAL TRAINER
- DESIGNER CLOTHES PREP SCHOOLS
- DIAMONDS PRIVATE JET
- FULL-TIME COOK PROPERTY
- GRANDEUR RACEHORSES
- ITALIAN SHOES SWIMMING POOL
- LIVE-IN MAID VACATION HOMES
- MANSSION

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

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.

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

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Preserving Your Memory

Summer/Fall 2017

Match These

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

Dropline

Regardless of which line you get into, the other ones move faster.

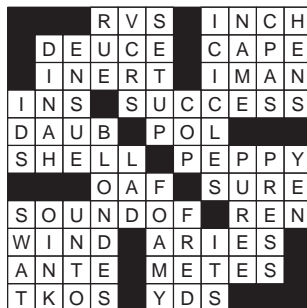
Leapfrog

1. Wake Forest; 2. George Mason;
3. Brigham Young; 4. Johns Hopkins;
5. Mount Holyoke; 6. Old Dominion;
7. Virginia Tech; 8. Sarah Lawrence;
9. Bryn Mawr.

Hidden Message

(Real luxury is) living in a house with so many closets that one of them is empty.

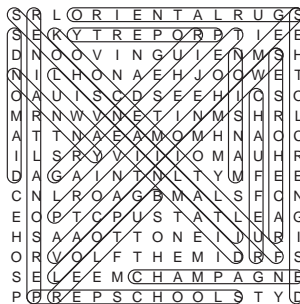
Crossword 1



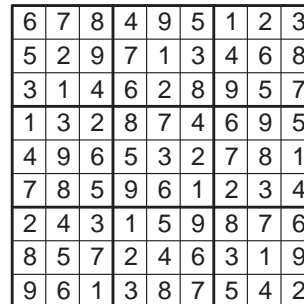
Crossword 2



Word-Find



Sudoku



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Summer Fruit Salad

Ingredients

- 1 cup watermelon, cubed
- 1 cup blueberries
- 1 cup strawberries, halved
- 1 cup raspberries
- 1 cup cherries, pitted and halved
- ¼ cup blackberries
- Juice of 1 lime

Directions

Mix all fruit. Squeeze lime juice over fruit; toss and serve. Serves 4.

Recipe courtesy of Dixie Yow, clinical research dietitian at Wake Forest Baptist Medical Center



What Are "Superfruits"?

"Superfruit" is a marketing term given to fruits believed to provide health benefits due to the high antioxidant levels, says Dixie Yow, clinical research dietitian at Wake Forest Baptist Medical Center in Winston-Salem, N.C.



"These are usually exotic fruits that are expensive and mostly sold as juices. There is no scientific evidence nor regulatory approval for the health claims of these 'superfruits,'" she says. She notes that while these exotic fruits are good for you, thanks to their high antioxidant levels, other non-exotic fruits can be just as healthy.

Fisher Center Scientist Spotlight

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



Dr. Jose H. Ledo

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

Hometown:

Rio de Janeiro, Brazil

Education:

Jose received his PhD in biochemistry and has been working in neuroscience for more than 7 years. He has worked at the Fisher Center laboratory for the past 2½ years. He received his PhD at the biochemistry program in Brazil at Institute of Medical Biochemistry, Federal University of Rio de Janeiro.

Fun Fact:

Since he was a kid, Jose was unconsciously interested in science because he was always curious about life and always tried to understand it and explain it. He became more conscious about it when he was in high school. At that time, he became closer to his uncle, who is a scientist as well. They used to talk a lot about science, and that's when he really got into it.

Area of Research:

Dr. Ledo has been focused on Alzheimer's research for the last 7 years. He has been working on a group of cells in the brain called microglia. They are the brain's immune cells and are believed to have an important role in Alzheimer's disease. A lot of attention has been given to the neurons in Alzheimer's field, but now scientists know that microglia play a critical role in the disease. His interest is in how these cells become defective in Alzheimer's disease. Based on data they have thus far, they believe that a protein called Presenilin 1, which is directly related to Alzheimer's disease, is also essential for microglia function.

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



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