New Susceptibility Gene for Alzheimer’s Disease Identified

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Last week results were published in the New England Journal of Medicine from two separate studies, conducted independently, implicating a new gene that leads to an increased risk of developing AD when present as a certain variant. The gene, called TREM2, has been found to regulate the clearing of cell debris including beta-amyloid. TREM2 has also been shown to exert regulatory control of brain inflammation, which has been associated with Alzheimer’s and cognitive decline.

After carrying out a large number of genome sequencing and genotyping operations, the researchers identified approximately 41 million markers, including 191,777 variants, from 2,261 Icelandic samples. These variants were then analyzed against the genomes of 3,550 persons with confirmed Alzheimer’s disease and a control population over the age of 85 without a diagnosis of the disease. The association analysis used to identify the variant TREM2 in the Icelandic population was then replicated against other control populations with Alzheimer’s disease maintained in the U.S., Germany, the Netherlands, and Norway.

The second group, included scientists from 44 institutions, and was led by University College London, which followed 25,000 individuals. They found a set of rare mutations that appeared more frequently in 1,092 Alzheimer’s patients than in the 1,107 healthy control-group subjects. It turns out, they also had identified TREM2.

The results of both studies suggest that a TREM2 mutation raises the risk for developing Alzheimer’s between three- and four-fold. As readers of this blog will recall, having two copies of the APOE4 gene increases risk by about fifteen-fold. As more large scale genetic studies are conducted, on vast numbers of subjects, many more such susceptibility genes will be discovered, which help explain the increased prevalence of AD in certain families. Such findings also open up new venues for targeted drug development.
Psoriasis Drug Offers Possible Promise for Treating Alzheimer’s Disease

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A new study published this week in the journal Nature Medicine shows that immunotherapy involving a pathway distinct from beta-amyloid processing and removal from the brain might hold promise for patients with AD. Researchers at the University of Zurich, in Switzerland, and the Charite University Hospital, Germany, targeted two components of the immune system known to boost inflammation in mice genetically programmed to develop Alzheimer’s.

Analyzing cerebrospinal fluid of 39 human subjects with Alzheimer’s disease and 20 healthy control subjects, the researchers showed that beta-amyloid may activate an immune pathway — including the release of two proteins known as interleukin-12 and interleukin-23. These two proteins subsequently activate a signaling molecule called P40 that increases inflammation across the brain.

When the researchers injected antibodies against P40 (versus placebo) twice a week into young mice that were genetically programmed to develop Alzheimer’s disease, they saw a distinct difference: At about middle age, the mice that received the P40 antibodies had 31% less beta-amyloid plaques in their brains than those who were given placebo. The treated mice also performed far better than those who received placebo in tests of memory and cognitive function.

Most importantly, the drug tested is currently FDA approved for psoriasis and is currently in use in human patients. Studies on the incidence of AD in such patients, or at least biomarkers of AD, would be very informative. Additionally, clinical trials would be warranted given these results.

BrainyApp was developed by Alzheimer’s Australia and Bupa Health Foundation to raise awareness of the risk factors for Alzheimer’s disease and other types of dementia, and to help you live a brain healthy life.

http://www.brainyapp.com.au/brainyapp/ BrainyApp, launched by Alzheimer’s Australia, is a free mobile app to assess brain-heart health and to work brain and heart healthy activities into your routine.
Why is it so hard for a caregiver to switch into "me" mode? Caregivers are constantly being told that they need to find time for themselves, whether that be looking for respite care, taking their loved ones to an adult day center, or just going for a short walk to get out of the house.

But, for a person who is used to taking care of someone else, finding the time to relax is often easier than actually being able to relax.

Cindy Laverty, caregiver coach, radio talk show host, and author of "Caregiving: Eldercare Made Clear and Simple," experienced this dilemma first-hand when she became the primary caregiver for her ex-husband's father and mother. Laverty says that she was so consumed with the need to remain in control and take care of everything in her in-laws' lives; that she neglected to take care of herself in the beginning stages of her caregiving journey. This led to a brush with extreme caregiver burnout and a resolve to re-think her approach to caregiving.

Laverty says there are certain thoughts that may prevent a caregiver from truly relaxing:

- "I need to be in charge of everything that has to do with my loved one's care." Laverty says that caregivers sometimes find it difficult to let go of their caregiving mindset—even when their mind and body are screaming at them to take a break. "You can't be in charge of everything," Laverty says, "People take on the role of caregiver thinking that they can do everything for six months, but, in this world, that role can last for years, even decades."

- "I can't stop worrying that something will go wrong if I'm not there." Some caregivers, when offered the opportunity to take a breather, find that they can't stop their minds from running through dozens of "What if...?" scenarios. What if my mother falls and the respite caregiver can't pick her up? What if my father has another stroke while I'm gone? These kinds of thoughts can make a caregiver incapable of relaxing, even when they're away from the person they're caring for.

- "I shouldn't be enjoying myself while my loved one needs care." Laverty admits that when she first started out taking care of her elderly relatives, she put herself in the position of being "on call" all of the time, despite the fact that she had access to additional caregivers who were able to help. Guilt can make a caregiver feel as though they're being selfish by taking some time for themselves. A guilt-ridden caregiver who does decide to take some time away may find themselves so consumed by regret that it's impossible to relax.

It's normal for caregivers to experience these thought patterns at certain times.
Laverty offers some tips to help caregivers cope with these thoughts, and learn how to let go:

- **Make the decision that your life matters.** Because they are so consumed by caring for their loved ones, caregivers are notoriously poor when it comes to taking care of themselves. According to Laverty, the only way to get rid of the obsessive, "on call," mentality is to decide that you matter just as much as your loved one does. It won't be easy, but deciding that you, the caregiver, deserve to have peace, tranquility, and calm, is the first step towards being able to make the most of your time away from your loved one. "No one is going to do caregiving the way the primary caregiver does, and that's ok, as long as the person is being cared for," Laverty says.

- **Ask for help, more than once.** A common caregiver lament is that they can't find anyone to help them. When caregivers tell Laverty that their family/friends refuse to help, she replies, "When was the last time you asked?" It's true that people may not be able to shoulder a significant portion of the caregiving burden, but Laverty says that an important part of asking for help is accepting how your friends and family show up. For example, your sister may not be able to help you with the day-to-day care of your mother, but she might be able to cook a week's worth of meals for you—this is how she is showing up to help you and your mother. If you demonstrate your appreciation for the assistance that others give, no matter how seemingly insignificant, it might make them more likely to seek other ways to help you in the future.

- **Decide to really be "gone."** Being "gone" means that, barring an emergency, you completely remove yourself from the situation of being at your loved one's beck and call. Making the decision to relax and truly be gone may be even more difficult for a caregiver than agreeing that you matter as much as your loved one does. Laverty attributes the trickiness of this endeavor to the fact that a caregiver's mind is constantly in "fix-it" mode. When you're taking care of an elderly loved one, it can be hard to accept that you often can't "fix" what's causing them pain. What you can do is help make them happier, healthier, and more comfortable. "When you stop trying to fix everything, it gets so much easier to relax," says Laverty.

- **When you have the time, do something you enjoy.** The key to successful relaxation, according to Laverty, is doing things that bring joy back into your life. This will mean different things for different people. For some it might be taking a hike with a good friend. For others, it could be getting a manicure, or a massage. "When you're engaging in joyful activities for yourself, it's hard to stay stuck in the 'What if's,'" Laverty says.

Learning how to let go and unwind will likely be a difficult process for most caregivers. Laverty cautions caregivers that being alone with your thoughts may not be a pleasant experience, at first. Ugly, scary emotions are likely to surface, but they have to in order to find peace. She suggests therapy, journaling, and meditation as a few ways to help a caregiver cope with these difficult feelings.
Relaxing: Why It’s Hard, and How Caregivers Can Learn to Unwind continued...

Ultimately, true relaxation is about discovering how to connect with (and love), yourself—warts and all. "Caregivers need to learn how to be easier on themselves. You don’t have to be perfect," Laverty says.

If you find that your caregiver guilt is provoked by this notion, Laverty recommends quelling it by asking yourself this question:

Why are you more into caregiving than you are into having joy, peace, and serenity?

A former caregiver, Cindy Laverty is the Founder of The Care Company, and host of The Cindy Laverty Show, the nation’s only commercial radio program dedicated to the subject of CARE - how we care for ourselves, so we can better care for each other. Cindy has established herself as an advocate and coach for America’s family caregiver. For more information, visit her website.

The Article “Relaxing: Why it’s Hard, and How Caregivers Can Learn to Unwind” is courtesy of AgingCare.com and written by Anne-Marie Botek.

About AgingCare.com

AgingCare.com is a leading website that connects people caring for elderly parents to other caregivers, personalized information, and local resources. AgingCare.com has become the trusted resource for exchanging ideas, sharing conversations and finding credible information for those seeking elder care solutions. For more information, visit www.AgingCare.com

Connecting People Caring for Elderly Parents

AgingCare.com is an online community that connects people caring for elderly parents to other caregivers, personalized information, and local resources.

To provide practical advice, dependable information, and support to its audience, AgingCare.com has created a powerful knowledge culture unlike any other—one where a thoughtful community of elder care experts and caregivers share ideas and deliver useful, reliable content. AgingCare.com was born out of the realization that there was no centralized resource for information on managing care for elderly parents. By providing a comfortable setting for caregivers, AgingCare.com has become the trusted resource for exchanging ideas, sharing conversations and finding credible information for those seeking elder care solutions. A dynamic online community, AgingCare.com allows caregivers to do all of the following in one place:

- Receive personalized information based on who the caregiver is caring for, the condition with which they are afflicted, their living arrangements, and location.
- Find Senior Housing and Home Care resources.
- Research articles specific to the health conditions of their loved one.
- Interact with AgingCare.com’s panel of elder care experts and editorial team.
- Gain knowledge about finances, legal matters, and other elder care issues, including Medicare and Medicaid.
- Participate in AgingCare.com’s rich community forum, where caregivers ask questions, give answers, exchange messages, and support each other through shared experiences.
Dear Samantha,

Traveling with a person who has dementia requires advance planning to ensure a safe and pleasurable trip for all. After determining the stage of the person with dementia, one of the first things you should consider before your trip is enrolling your mother in MedicAlert® + Alzheimer’s Association Safe Return®, if she is not already enrolled. If she is enrolled in the program, notify the program of your travel plans. Also, when in the planning phase of your trip, be sure to consider your mother’s needs. For instance, is there a specific time of day your mother is at her best? You may want to plan your travel time accordingly.

Getting to your destination should be short and simple; try not to travel during peak seasons or times. The two most commonly used methods of transportation are automobiles and airplanes. If you are traveling by car, try to bring another person with you, preferably someone who can share the driving, who can also assist with your mom. Make sure you have emergency equipment (spare tire, jumper cables, flashlight, water, etc.) in the car. Bring your mother’s favorite books and music with you to help pass the time. Also, make sure to schedule rest stops and bathroom breaks every couple of hours.

If you are traveling by airplane, schedule as few layovers and flight changes if possible. Take advantage of TSA Cares (855-787-2227), a free helpline designed to assist travelers with disabilities and medical conditions, prior to getting to the airport. Travelers are encouraged to call TSA Cares 72 hours before traveling with questions about screening policies and procedures, and to learn what to expect at security checkpoints. When you get to the airport, speak with airline personnel about how they can best assist you and your mother. Since dementia is often a nonapparent disability, you may want to bring a note from your mother’s physician. Airports are very busy places and taking advantage of the airline’s escort services may be helpful. Request a wheelchair so you and your mother can be given priority while at security checkpoints, airport gates and during the boarding process. Be sure to also remove items which may cause your mother to set off the metal detector, and have her wear slip-on shoes to make the shoe removal process easier during security checks.

Dear Helpline,

I am planning a trip to visit relatives this winter and would like to take my mother. Some of my friends who have parents with Alzheimer’s disease are telling me I shouldn’t take my mother on the trip because it will be too much work, but I would like her to see and spend time with family members. Any tips on how to make traveling with a person with dementia a stress free and enjoyable experience? — Samantha

Dear Samantha,

Traveling with a person who has dementia requires advance planning to ensure a safe and pleasurable trip for all. After determining the stage of the person with dementia, one of the first things you should consider before your trip is enrolling your mother in MedicAlert® + Alzheimer’s Association Safe Return®, if she is not already enrolled. If she is enrolled in the program, notify the program of your travel plans. Also, when in the planning phase of your trip, be sure to consider your mother’s needs. For instance, is there a specific time of day your mother is at her best? You may want to plan your travel time accordingly.

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Helpline Helps When Traveling with Mom continued..

Whether traveling by car or airplane, encourage your mother to dress in clothes that are comfortable and easy to put on and remove. Also include a card with her name and the contact information of the place you will be staying. In a small bag, be sure to have medications, insurance cards, physician’s information, an extra set of clothing, and snacks.

It would be best to give some background about your mother’s condition to the relatives you will stay with in advance of your arrival. Talk with your relatives and educate them on the stage of dementia your mother is in. Explain that your mother may have difficulty recognizing them, for instance, but that she can still very much enjoy their company. If your relative plans on having a gathering, suggest an “open house” in which other family members and guests can drop in and leave at different times since people with dementia usually do better with just a few guests at a time. Give your family members suggestions on how they can best interact with your mother, as you are the best judge of what your mother can or cannot tolerate and may or may not enjoy. Once you arrive at your destination, call our 24-hour Helpline at 800-272-3900 for information about the local Chapter at your destination.

Stephanie Aragon is the Helpline Manager for the Alzheimer’s Association, New York City Chapter.

This article is reprinted with permission from the Alzheimer’s Association, New York City Chapter Newsletter, Summer 2012.

Alzheimer’s Association 24/7 Helpline

The Alzheimer’s Association Helpline, 1.800.272.3900, provides reliable information and support to people with memory loss, caregivers, health care professionals and all others in need of assistance. Trained and knowledgeable staff members answer questions and concerns regarding memory loss, dementia and Alzheimer’s, medications and other treatment options, general information about aging and brain health as well as guide individuals on how to provide quality care and find the best care from professionals. Callers can also seek help with legal, financial and living-arrangement decisions in addition to referrals to local community programs, services and ongoing support.

The Helpline also features confidential care consultation provided by master’s level clinicians who can help with decision-making support, crisis assistance and education. A translation service can accommodate calls in 170 languages and dialects.

Call us for reliable information and support anytime—day or night!

alzheimer’s association

alz.org | 1.800.272.3900
Giving to others has become a large part of the holiday season, yet giving has lost much of its earlier significance. For many, it is still a token of love and a way of showing you care. With an estimated 5.4 million Americans diagnosed with Alzheimer’s disease, and their more than 15 million unpaid caregivers, there’s a good chance you will be buying a gift for someone who is living with the disease. The following suggestions have been compiled over the years by staff of the Duke Family Support Program. Keep in mind that the appropriateness of these presents will vary, depending on the function and preferences of the person with the diagnosis.

**Gifts for the Person with a Memory Problem:**
Family and friends are often at a loss when deciding on a practical or meaningful gift for the individual with memory problems. Try to find something that challenges the mind, exercises the hands or body, or stimulates the senses. Below are some favorites.

- **Music CDs and Preferred Player** recordings of favorite old tunes. In general, the love of music remains for individuals with dementia. But be aware that likes and dislikes may change as the disease progresses.

- **Tickets to a movie**, concert, holiday house tour, ball game or an activity the person enjoyed in the past.

- **Activity books.** Crossword puzzles, find-a-word and math games for those in the early stage. Or for those more impaired, look for coloring books designed specifically for adults with memory problems.

- **Books** with large print or lovely illustrations.

- **A magazine subscription.** One good choice is Reminisce, a nostalgia magazine, mainly written by its readers, and filled with black and white photos and early color slides.

- **DVDs** of classic movies and TV shows.

- **Items to help remember things.** Post-It notes, pocket-sized notebooks and calendars make great gifts for those in the early stages.

- **A picture phone.** Special phones that hold photos and allow you to simply press a friend or family member’s picture to dial their number.

- **Photos.** In albums, framed or a collage.

- **A memory book.** Fill a scrapbook with photos, newspaper clippings, awards, and travel souvenirs chronicling the individual’s life.

- **Games and puzzles.** Look for appropriate adult choices that engage without frustration.

**Craft materials** suitable to a person’s past interest and current abilities.

- **Clothes** that are easy to wear. Buy easy-to-wash and wrinkle free clothes like sweat suits. Replace old socks with new pairs of identical socks.

- **Spa products** for pampering make great stocking stuffers or Chanukah gifts.

- **Blankets.** Soft ones for cold winter days. Or make a lap blanket with different textured materials.

Continued on next page...
Gifts for the Caregiver:
Family caregivers for those with dementia often provide care for more than 40 hours a week (and for years), experiencing little time for themselves as well as tremendous stress. So, ideal presents for these caregivers include gifts of time and gifts that pamper. Here are just a few suggestions.

- Dinner out, including coverage for the person with the diagnosis.
- Time off. Also known as respite. Take over for your favorite caregiver for an evening, a day, or a weekend. They may go for a walk, to their support group, to visit a college friend or grandchildren.
- Day Programs. Arrange for the person with the diagnosis to spend some time in an adult day program.
- Hire in-home help. Hire a professional caregiver once a week or once a month.
- A housecleaning service would be appreciated by most caregivers. But if your friend or relative would construe this as criticism, pick something else.
- Gift certificates. To her favorite manicure salon, store or restaurant.
- Money. A gift of money is no longer considered in poor taste. It may be welcome by a family struggling to provide care or unable to afford respite.
- Help with end-of-season tasks. Clean the gutters, rake the leaves, turn over the garden.
- Run errands. Pick up groceries, prescriptions, or medical supplies. Make it easy for the caregiver to say yes, buy saying, “I’m going out anyway.”
- Bring dinner. Or stock the freezer with several homemade meals.
- Digital Video Recorder. Buy a DVR/TiVo along with years of service so your friend or relative can record favorite programs to watch when time permits.
- Just listen. Caregivers often need someone just to listen, to let them vent about their day. A nonjudgmental ear.
- Visit. Visit when you have no agenda. And visit regularly. Call the caregiver to ask if it’s okay to come by for a short while. This may feel awkward at first when there are so many tasks screaming to be done. But this kind of visit becomes more valued as time goes by. Be creative!

This information originally appeared in The Caregiver, Fall 2012 and is reprinted with permission from the Duke Family Support Program. www.dukefamilysupport.org
ADNI II Study

The goal of the Alzheimer's Disease Neuroimaging Initiative Study is to learn how to stop the progression of mild cognitive impairment (MCI) and Alzheimer's disease in future generations. Information from the study might, in the future, lead to new treatments.  [http://adcs.org/Studies/ImagineADNI.aspx](http://adcs.org/Studies/ImagineADNI.aspx).

Resveratrol for Alzheimer's is Recruiting

[http://www.adcs.org/Studies/RES.aspx](http://www.adcs.org/Studies/RES.aspx)

Nerve Growth Factor Study (NGF)

[http://adcs.org/Studies/NGF.aspx](http://adcs.org/Studies/NGF.aspx)

The NGF is a Phase II clinical study of Ceregene's CERE-110, a gene therapy product designed to deliver nerve growth factor (NGF) to the brain for the treatment of Alzheimer's disease (AD) is currently underway. This study is a randomized, double-blind, placebo-controlled trial and employs gene therapy to deliver nerve growth factor (NGF) directly into the brain.

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