



HBA

PARTICIPANT NEWS

The Journal for Participants in the Home-Based Assessment Trial

Ginkgo Biloba Phase III Trial Results

By Michael Rafii, M.D., Ph.D., ADCS Associate Medical Director



Results of a large, six-year long, randomized trial showed no beneficial effect of Ginkgo biloba in the prevention of Alzheimer's disease or dementia in participants with normal cognition or in those with mild cognitive impairment. The findings from the Ginkgo Evaluation of Memory (GEM) trial were published in the November 19, 2008 issue of the Journal of the American Medical Association. The study was led by Stephen T. DeKosky, M.D., formerly of the University of Pittsburgh, now vice president and dean of the School of Medicine at the University of Virginia in Charlottesville and a member of the Alzheimer's Disease Cooperative Study.

Ginkgo biloba is a Chinese medicine that has been used for centuries. Ginkgo is one of the most popular herbs in the United States and Europe, with sales over \$250 million per year. The medicine is extracted from leaves of the Ginkgo biloba tree. **(Cont'd on Page 3)**

CAN SLEEP AFFECT MEMORY & COGNITION?



Missing your zzzz's can affect your functioning

Sleep, that blissful place in the Land of Nod. We all need it and we all crave it, particularly when we are deprived of a good night's rest. But as many have observed, missing your zzzz's can affect your functioning the next day as well as cause lapses in attention and reduced working memory.

A landmark study at North Carolina State University reported in the journal *Research in Aging* in November 2008 showed that African-American older adults who found it difficult to fall asleep were at a higher risk of experiencing memory problems. The study examined 174 participants between the ages of 65 and 90 and showed that those seniors who had trouble falling asleep did much worse on memory tests than participants who fell asleep right away.

Language is also well known to be affected by sleep problems. The temporal lobe of the brain is known to be associated with the processing of language. During verbal learning tests on subjects who are fully rested, **(Cont'd on Page 4)**



Greeting from the HBA Principal Investigator

Dear HBA Participants,

We are delighted at how quickly participants are enrolling in the Home-Based Assessment research study. At this juncture we are nearly done enrolling eligible participants necessary for this study. We are extremely grateful to you for playing a part in the effort to prevent memory loss and Alzheimer's disease (AD).

We are very close to our goal of completing enrollment. If you know of anyone in your community who would be interested in participating in this important research study and helping us find answers to detecting the earliest changes in memory and thinking, please ask them to contact your research center. Just as you were interested in finding out about how you

could contribute to the memory research effort, so may your friends. Please encourage them to call your research center or if they are in another city to phone the Alzheimer's Disease Education and Referral Center (ADEAR) at 1-800-438-4380.

We know that over the next four years you will have many activities that will keep you busy; we appreciate that you will be taking the time to stay with us. Please remember how much we all appreciate the effort that you and your families are making on behalf of memory research. Together, we can make a difference!

Mary Sano, Ph.D

HBA Principal Investigator

Director, Mount Sinai Alzheimer's Disease Research Center



THE ALZHEIMER'S DISEASE COOPERATIVE STUDY WEB SITE

Do you know how the Alzheimer's Disease Cooperative Study (ADCS) functions? The ADCS, formed in 1991 as a cooperative agreement between the National Institute on Aging (NIA) and the University of California San Diego, is a consortium of over 70 Alzheimer's disease research sites around the United States and Canada. The ADCS is a major initiative for Alzheimer's disease (AD) clinical studies to facilitate the discovery, development

and testing of new drugs for the treatment of AD.

In fact, the HBA study is an ADCS study as are many ongoing studies at your research clinic and others around the country.



Check out our website at **<http://www.adcs.org>** and learn about the ADCS. You will also find

general information on AD and other dementias, AD research studies in progress, research news, and helpful links.

Ginkgo Biloba Phase III Trial Results



(Cont'd from Page 1)

The rate of total dementia did not differ between groups: Ginkgo biloba versus placebo.

It has been believed to improve brain function. The purported effect of Ginkgo biloba is by the action of multiple antioxidants, as well as its ability to increase blood flow to various parts of the brain and its ability to reduce inflammation.

The study was a randomized, placebo-controlled clinical trial carried out at four academic medical centers in the United States to see whether treating with 120 mg of Ginkgo biloba two times a day could prevent incident dementia or Alzheimer's disease versus placebo. Patients were assessed every 6 months for dementia.

The study enrolled 3,069 participants aged 75 or older. After a median follow-up of 6.1 years, 523 subjects were diagnosed with dementia, 246 (16.1%) in the group taking placebo, and 277 (17.9%) in the group taking Ginkgo biloba. Of the total dementia cases, 92% were classified as possible or probable Alzheimer's disease or Alzheimer's disease with evidence of cerebrovascular disease.

The rate of total dementia did not differ between groups, Ginkgo biloba versus placebo. The rates of Alzheimer's-type dementia were also similar, between the Ginkgo biloba versus placebo groups. Also, there was no effect of treatment on the rate of progression to dementia in those with mild cognitive impairment.

Adverse events were similar between groups, and there was no statistically significant difference in the rates of serious adverse events or mortality. Because of previous concerns about a possible bleeding risk with Ginkgo biloba, the protocol called for discontinuation of the study drug with the institution of warfarin therapy that resulted in the dropout of 214 subjects: 112 in the Ginkgo biloba group and 102 in the placebo group. There were twice as many hemorrhagic strokes in the Ginkgo biloba group versus placebo (16 versus 8), but the number of cases was small and was not statistically significant.

The study was co-funded by five components of the National Institutes of Health (NIH): National Center for Complementary and Alternative Medicine (NCCAM); National Institute on Aging (NIA); National Heart, Lung, and Blood Institute; National Institute of Neurological Disorders and Stroke; and the Office of Dietary Supplements.



CAN SLEEP AFFECT MEMORY & COGNITION?

(Cont'd from Page 1)

functional magnetic resonance imaging scans show that this area of the brain is very active. However, in sleep deprived subjects there is no activity within this region as reported in the journal *Nature* by UCSD researcher J. Christian Gillin and colleagues. The effects of this inactivity can be observed by the slurred speech in subjects who have gone for prolonged periods with no sleep.

But at issue is more than just forgetting where you left your keys and effects on language. It's about quality of life and the effect of sleep on health and the aging process itself. In a 2008 study led by Sonia Ancoli-Israel, PhD at UCSD which was presented at the 22nd Annual Meeting of the Associated Professional Sleep Societies, a direct link was found between normal sleeping and healthy aging. The study followed 2,226 women 60 years of age and older and found that the better the study participants slept, the more successful they were at aging successfully and healthfully.

"Our findings that reports of better sleep are related to successful aging reinforce the idea that good sleep is of utmost importance for good health," said Dr. Ancoli-Israel.

If you continually sleep less than what your body needs, many doctors say it will affect more than cognition and memory. Numerous studies have shown a link between a lack of sleep and developing significant health problems such as cardiovascular disease, diabetes and obesity.

Because seniors often experience problems getting a full night's rest, it is assumed that age causes insomnia. Most physicians and sleep experts agree that age is not the contributing factor, but rather untreated sleeping disorders, poor sleeping habits, and medications are often the culprit.

Regardless of your age, health practitioners say that getting a good night's sleep is vital to personal well-being and physical health. Not only will it help restore memory and cognition the next day but the rest allows the body to repair cell damage and revives the immune system which in turn helps to fend off disease.

Most people need seven to eight hours of sleep to function optimally the next day. If you or someone you know has trouble falling asleep or staying asleep consider the following tips from the National Sleep Foundation:

- Ⓒ **Establish a nighttime routine and go to bed at the same time each evening.**
- Ⓒ **Make sure your bedroom is quiet, dark and on the cool side.**
- Ⓒ **Avoid alcohol and caffeine in the late afternoon and evening.**
- Ⓒ **Avoid spicy foods and big meals prior to bedtime. Eat a moderate meal at least three hours before you go to bed.**
- Ⓒ **Try not to nap during the day but if you must, keep it under 30 minutes and no later than 3 p.m.**
- Ⓒ **Don't drink large amounts of water or other fluids 1 – 2 hours before bedtime, as you may likely get up at night to go to the restroom, and further disrupt sleep**
- Ⓒ **Try taking a warm bath, reading outside of the bedroom or playing some gentle music.**
- Ⓒ **If you think you might have a sleep disorder such as sleep apnea, restless leg syndrome or periodic limb movement disorder, see your doctor. There are treatments available.**
- Ⓒ **Certain medications can disturb sleep. Ask your doctor if any of your medications have this side effect. If they do, ask if it can be taken earlier in the day or if there is an alternative.**
- Ⓒ **Exercise every day, in the morning or early afternoon. Regular exercise promotes good sleep.**

BIOMARKERS

**WHAT THEY ARE
WHY THEY'RE
IMPORTANT**

You have probably heard of biomarkers and perhaps have wondered what they are and how they are useful in research. A biomarker reflects physiological activity such as a protein or image or chemical indicator that shows signs of a disease in a live person. They can be molecules in blood or spinal fluid, or patterns seen on imaging tests.

To find and see the presence of a biomarker, researchers collect urine, blood, saliva and stool samples, and perform imaging tests. They are typically used for diagnosing diseases such as cancer, diabetes, and high cholesterol for heart disease and stroke. They have not been used to diagnose Alzheimer's disease (AD) because researchers have not found a specific biomarker that absolutely defines AD. But that is changing because there has never been a greater need for finding an AD biomarker that could assist physicians in accurately diagnosing the disease.

The compelling reasons for finding an AD biomarker are many: to be able to precisely diagnose AD at any stage, to be able to diagnose and treat AD at its earliest stage, to be able to diagnose AD even before symptoms appear, and to measure research drugs on the disease's evolution.

To find this standard of biomarkers Dr. Douglas Galasko of the University of California San Diego (an HBA site), and a member of the Alzheimer's Disease Cooperative Study (ADCS), embarked on a five-year research study to measure the presence of different biomarkers in the blood and cerebrospinal fluid. The purpose of the study is to find out whether varying levels of these proteins are altered in people with normal cognition, mild cognitive impairment or AD. They will also be testing blood to find out which form of a gene called Apolipoprotein E (APOE) a person may have. Previous studies suggest that this gene may influence the risk of developing AD.

At the Wien Center for Alzheimer's Disease and Memory Disorders at the University of Miami, an HBA site, Dr. Ranjan Duara thinks there is already an accurate biomarker available

that does not require drawing spinal fluid. He developed a method for quantifying atrophy in three areas of the medial temporal lobe of the brain. He recently published a study in *Neurology* 2008 showing that this method can help distinguish between people with AD vs Mild Cognitive Impairment (MCI) vs normal cognition. Dr. Duara's study also demonstrated that the assessment can help predict who will progress from MCI to AD. Dr. Duara's method involved examining MRI scans in a new way, unlike the traditional method of reading MRIs.

"We have shown that certain views of the brain that can be provided by current MRI and CT scanners can give

evidence of atrophy (shrinkage) of brain regions that are characteristically affected by Alzheimer's disease. These brain images can be used to make a diagnosis even at a very early stage of the disease, well before the patient has developed a full blown dementia, and sometimes even in cognitively normal people."

In October 2007 Dr. Tony Wyss-Coray at Stanford University published a paper in *Nature Medicine* showing preliminary evidence of an AD fingerprint in the blood. A panel of 18 proteins distinguished between AD and non-AD patients. Using the signaling proteins to categorize the patients in a blinded set of 92 samples the researchers found the protein set mirrored clinical diagnosis in 89% of the cases. Furthermore, in 47 patients with MCI, the biomarkers accurately predicted an AD or non-AD diagnosis two to six years after the initial MCI diagnosis. It also accurately identified non-AD in eight of 47 cases that advanced to other types of dementia. The researchers concluded that a plasma biomarker can distinguish AD years before a clinical diagnosis can be made.

Researchers are working to be able to accurately identify, diagnose and treat Alzheimer's much in the way other diseases are diagnosed and treated now. Finding a biomarker to unmistakably identify AD will be an important step in that process. Researchers are getting closer every day.

Finding a biomarker to unmistakably identify AD will be an important step.

ALZHEIMER'S DISEASE | INFORMATION NETWORK



“The only way to move forward is through clinical trials, and for this we need volunteers willing to help us test new ideas.”

The Alzheimer's Disease Cooperative Study (ADCS), in collaboration with the National Institute on Aging, has developed a nationwide information network of people who are interested in learning more about Alzheimer's disease (AD) and dementia. The purpose of the Alzheimer's Disease Information Network is to educate the public about AD research and upcoming clinical research studies through a monthly e-newsletter.

Currently, more than five million Americans are living with Alzheimer's disease. Age is the major risk factor. Already, it is estimated that one in eight people 65 and older have the mind-destroying disease; it affects 50% of people over 85. Unless researchers find a way to delay or prevent Alzheimer's assault on the brain, it is estimated that some 7.7 million people will develop the disease by 2030. By 2050, that toll could reach 16 million. In 2011 the country's largest generation, the baby boomers, will begin turning 65.

“The only way we will ever find a cure or prevention for Alzheimer's is to study every viable avenue for therapeutic treatment,” says Paul Aisen, M.D., director of the ADCS. “To date we have investigated 23 therapies and have several more in the pipeline. The drugs currently on the market that help improve symptoms got there because people were willing to help us study these therapies. The only way to move forward is through clinical trials, and for this we need volunteers willing to help us test new ideas.”

If you would like to be part of this information network and receive regular e-mail alerts announcing new clinical studies as well as updates on research and treatment, please go to <http://www.adcs.org/Research/registry.aspx>. For more information on the ADCS visit the ADCS website at www.adcs.org.

Join the **ALZHEIMER'S DISEASE INFORMATION NETWORK**

WINTER RECIPES

Winter Squash With Pear Soup

Serves 6



- 1 tablespoon olive oil
- 1/2 cup chopped mild onion
- 1 garlic clove, minced
- 1 tablespoon mild curry powder
- 1/2 of a medium butternut squash (approx one pound), peeled, seeded and diced
- 2 ripe pears, peeled, core and diced
- 3-1/2 cups low-sodium chicken stock
- 1 teaspoon vanilla extract
- Salt and pepper to taste

In a soup pot sauté the onions in olive oil over medium heat until softened, about 5-6 minutes. Add minced garlic and curry powder and continue sautéing for another minute. Stir in diced squash and pear pieces. Keep sautéing for another 5 minutes. Add chicken broth and vanilla (that will give it a rich buttery flavor). Cover and bring to a boil. Turn heat to low and simmer for 20 minutes until squash and pear are tender. Transfer soup to a food processor or blender and puree until smooth. Work in small batches if necessary. Return soup to the pot. Taste and add salt and pepper if necessary.

Sweet Corn Pudding

Serves 6



- 4 cups frozen corn kernels, thawed
- 4 large eggs or egg substitute equivalent
- 1 cup fat-free half and half
- 1/2 cup whole or low-fat milk
- 6 tablespoons sugar
- 2 tablespoons butter, room temperature
- 2 tablespoons all purpose flour
- 2 teaspoons baking powder
- 1 teaspoon salt

Preheat oven to 350°F. Butter 8x8x2-inch glass baking dish or coat with non-stick spray. Blend all ingredients in a food processor until almost smooth. Pour batter into the prepared dish. Bake until brown and center is just set, about 45 minutes. Cool 10 minutes; serve.

Easy Chipotle Chicken Tacos

Serves 4 to 6



- 6 flour tortillas, warmed in the oven or microwave if desired
- 1 sweet yellow onion, thinly sliced (look for Mayan or Walla Walla sweets)
- 2 minced garlic cloves
- 1 Tbsp. vegetable or olive oil
- 1 c. chipotle salsa
- 1/2 of a 15-ounce can of chopped tomatoes, with half the can's juice
- 2 Tbsp. fresh lime juice
- 2 c. (loosely packed) coarsely shredded, cooked chicken (preferably grilled or roasted)
- Salt and pepper to taste
- 1 small ripe avocado, peeled, pitted and cut into 1/8-inch pieces
- 3 to 4 Tbsp. finely grated Mexican queso añejo, Parmesan or Romano
- Chopped cilantro, for garnish

In a large skillet, add oil and onion and cook over medium heat until tender, about 5 minutes. Stir in garlic, salsa, tomatoes with their juice and the lime juice. Simmer, stirring until quite thick, about 5-10 minutes. Stir in the chicken, then taste and season with salt and pepper. Spoon chicken mixture into a bowl. Accompany with avocado pieces, cheese and cilantro. Place warm tortillas on a plate covered with a tea towel to keep remaining tortillas warm. Have each diner make their own tacos.

BRAIN EXERCISE

Mind Games are a really fun way to exercise the mind. Check out the mind games on the AARP website — good for both caregivers who want to stay sharp and study participants with mild dementia.

http://www.aarpmagazine.org/games/printandplay_brain_tasers.html

Time to Rhyme— Find a pair of rhyming words to describe the definition:

- | | |
|--------------------------|------------------------|
| 1. SAD MARSUPIAL | 8. GENUINE ENTHUSIASM |
| 2. COMICAL RABBIT | 9. CITY HALLS |
| 3. CLUELESS BOYFRIEND | 10. CERTAIN REMEDY |
| 4. TROJAN HORSE | 11. FAKE DIAMOND |
| 5. OPERA SOLOIST | 12. ODD TRANSFORMATION |
| 6. LOATHING | 13. ASTRONAUT |
| 7. CENTRAL GERMAN BLONDE | 14. CROP |

*1. Blue Kangaroo 2. Funny Bunny 3. Slow Bean 4. Phony Pony 5. Lone Baritone
6. Great Hate 7. Flaxen Saxon 8. Real Zeal 9. Mayors' Lairs 10. Sure Cure
11. Mock Rock 12. Strange Change 13. Space Ace 14. Field Yield*

ANSWERS



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