iADC
Indiana Alzheimer Disease Center

Reflections

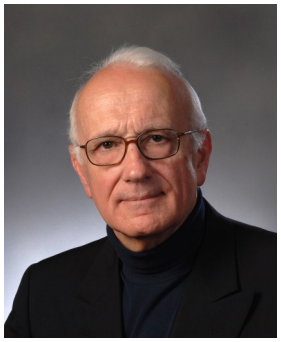
Winter 2013
Volume 21 Issue 2

INDIANA ALZHEIMER DISEASE CENTER NEWSLETTER
INDIANA UNIVERSITY SCHOOL OF MEDICINE
INDIANA UNIVERSITY

IADC Announces a Transition in Leadership

Andrew J. Saykin, PsyD.

Andrew J. Saykin PsyD, Raymond C. Beeler Professor of Radiology and Imaging Sciences was appointed director of the Indiana Alzheimer Disease Center (IADC) in February 2013. The IADC, based at the Indiana University School of Medicine and IU Health Neuroscience Center, is one of 29 centers sponsored by the National Institute on Aging. The IADC was established in 1991 by Professor Bernardino F. Ghetti, the founding director and a pioneering molecular neuropathologist, along with a multidisciplinary group of highly committed colleagues including co-leaders Dr. Hugh C. Hendrie, Emeritus Chairman and Professor of Psychiatry, and P. Michael Conneally, Emeritus Professor of Medical and Molecular Genetics. Dr. Ghetti, Distinguished Professor and Chancellor's Professor of Pathology and Laboratory Medicine, will continue to direct the Neuropathology Core of the IADC which has conducted numerous ground breaking studies of hereditary dementias including Alzheimer disease (AD) and other neurodegenerative conditions.



Bernardino F. Ghetti, M.D.

Dr. Saykin, a neuropsychologist, whose research focuses on using advanced brain imaging and genetics methods to understand disorders affecting memory and cognition, joined the IADC team after being recruited to Indiana from Dartmouth Medical School in late 2006 to lead the IU Center for Neuroimaging. Advances in brain imaging have become increasingly important for early detection of disorders leading to dementia. Therefore, an early priority was to add a Neuroimaging Core to the IADC which was successfully accomplished with a competitive grant in 2009. As the new center director, Dr. Saykin is honored to carry on the longstanding tradition of excellence in dementia research at the IADC toward the goal of one day preventing this devastating disease through early detection and identifying novel therapeutic approaches. He believes that transdisciplinary team science is the key to reaching these goals and looks forward to an expanded scope for the IADC with new collaborators and especially promising junior scientists joining the urgent efforts to address AD and related dementias. He is optimistic about advances in the field of dementia research and excited to have the opportunity to collaborate with the highly accomplished group of core leaders, clinicians and scientists who have made many contributions to research as well as state-of-the-art patient care and family and community education and intervention. ⌑

INSIDE THIS ISSUE:

Sleep Disturbances and Dementia

Good sleep is associated with many health benefits. However, as people age, problems with sleep are very common. There is increasing interest in the effect of sleep on cognition, especially in the older adult population. There is some growing evidence that sleep-disordered breathing (SDB) may contribute to cognitive impairment among older adults. If this is the case, treatment of SDB may be an effective way to help prevent cognitive decline for many. A recent review in *Current Neurology and Neuroscience Reports* summarized the existing research in this area, and presented a hypothetical model of how SDB may contribute to cognitive impairment.

One significant finding in the literature is that, obstructive sleep apnea (OSA) and SDB are increasing in prevalence in the older adult population, the cause of which is currently unknown. Older adults with dementia appear to have a greater rate of sleep disorders than the older adult population in general, although it is unclear whether one condition causes the other, or whether both share an underlying cause. There may be a few possible relationships between SDB and cognitive decline. It has been hypothesized that the oxygen deficit that can occur from OSA may explain some of the relationship between SDB and cognitive impairment, though findings on the relationship between OSA and cognitive decline have been mixed. Some research suggests that younger adults with OSA are more vulnerable to suffering cognitive effects than are older adults with OSA, while other research indicates that OSA may explain some cognitive impairment in older adults. Some researchers believe that it is through fragmentation and disruption of sleep that SDB can cause cognitive impairment, rather than through disrupted intake of oxygen, although the review's authors argue that the lack of oxygen has stronger evidence in the existing research. It has also been hypothesized that individuals with mild cognitive impairment (MCI) are more vulnerable to the effects of SDB than the general population.

In the recent review, the authors propose a model in which the lack of oxygen caused by OSA damages the vascular health of the individual, which can negatively impact the person's cognitive health through multiple pathways. At this point, more longitudinal studies need to be conducted to test the various hypotheses that have been suggested by the associations between SDB and cognitive decline, and to resolve the competing hypotheses on whether or not SDB affects cognition across age groups.

As the research continues to sort out the causes and effects of disrupted sleep, we do know that sleep problems are very common in patients with Alzheimer disease (AD) and related dementias. We have learned that establishing and practicing good sleep habits are very important and can help reduce some of the sleep related problems. The following are some suggestions that may help with sleep problems:

- Establish a routine and stick to it; for example wake up at a reasonable time every morning.
- Reduce naps during the day…do not use the bedroom for naps but rather take naps in recliner or on the couch so as not to confuse naptime for bedtime.
- Take a daily walk; exercise is excellent for vascular health and can help promote better sleep at night. Taper off physical activity late in the day, as exercise too close to bedtime can make it difficult to relax and get ready to sleep.
- Reduce or eliminate caffeine and alcohol…these

(Continued on page 3)

Sleep Disturbances and Dementia

(Continued from page 2)

can contribute to anxiety and confusion. Substitute caffeine-free soft drinks or non-alcoholic beer and wine if having a drink is a nightly ritual.

Brandy Matthews, M.D.

- Establish and stick to a bedtime routine…do the same things, such as brushing teeth, using the toilet, getting into pajamas, listening to music, rubbing hands and back, in the same way each night. Make sure the bedroom is comfortable—not too hot or too cold—have a favorite blanket nearby, turn on a nightlight for safety.
- Manage medications…check with your doctor or pharmacists about the best time to give/take medications. Some drugs have a stimulating effect and are best given in the morning. Sleep aids are not recommended for people with dementia because they can increase confusion and lead to falls.

Dr. Brandy Matthews, Assistant Professor of Clinical Neurology and a physician-investigator in the iADC, suggests, "The characteristics of sleep disruption, such as acting out dreams, may be very helpful in the diagnosis of dementia, but the most clinically-relevant point is treating the symptoms in an effort to protect patients from the untoward consequences of sleep disorders and to improve quality of life for patients and caregivers." If you, or your family member with dementia, are having trouble sleeping it is important to talk to your doctor. There may be an unrelated problem contributing to the sleep disturbance, such as pain or prescription medications, that your doctor can address, and sleep disruption specifically related to dementia warrants targeted interventions.

Reference: Zimmerman ME, Aloia MS. Sleep-disordered breathing and cognition in older adults. *Current Neurology and Neuroscience Reports*; (2012),12: 537-546. ⌑

Webinar: Preventive Treatment for Alzheimer Disease

On November 30th, Dr. Saykin participated in a Webinar sponsored by Mt. Sinai Alzheimer's Center. Three international experts in the field of Alzheimer disease presents:

- How genetic and other factors can determine when amyloid protein is deposited in the brain, resulting in symptoms of Alzheimer disease many years later.
- Why effective treatment of Alzheimer disease may need to begin very early, well before symptoms are present.
- How new treatment trials, which will begin in 2013, are being designed for the prevention of Alzheimer disease.

Presenters are:

Susan M. Landau, PhD—Early detection of Alzheimer's disease;

Andrew Saykin, PsyD—Genetics, Biomarkers & Imaging; and

Jessica Langbaum, PhD–The New Era of Alzheimer's Prevention Treatment Trials

You will find the recording and slides of all three presentations included on the website. Click on the following Webinars - Indiana Alzheimer Disease Center or cut and paste to your web browser: http://iadc.iupui.edu/resources/w/

Reflections
WINTER 2013
Volume 21 Issue 2

Exercise and Cognition

...Frederick W. Unverzagt, PhD, Professor of Clinical Psychology in Clinical Psychiatry and Professor of Clinical Medical and Molecular Genetics

Frederick Unverzagt, PhD

There is growing evidence that exercise has a positive effect on health including brain health. Dr. Frederick W Unverzagt, Professor in the Departments of Psychiatry and Medical and Molecular Genetics at the IU School of Medicine provides some reviews of recent research on the benefits of both cognitive and physical exercise.

Do cognitive exercises really help improve cognitive function?

A recent analysis of many studies showed that persons with mild cognitive impairment (MCI) did see some mild to moderate cognitive benefits by participating in cognitive training and those benefits lasted through follow-up [Li, H.J., et al., 2011]. It should be noted that the MCI patients given training in this analysis actually showed improvement over baseline whereas control MCI subjects (those who did not receive training) declined in nearly all areas from the baseline measurements to the post-test. Also, significant net treatment gains were noted in those studies that included a follow-up but the average post-training interval is not specified. The moderator analysis suggested no effect of subject age or years of education on outcomes and no differences between training delivered by computer versus in-person methods nor was there a difference between group versus individual instruction. Overall, **these findings strongly support the idea that patients with cognitive impairment and MCI do benefit from cognitive training and that the benefits last beyond the immediate post-training time frame.**

What about physical exercise...does that help?

A meta-analysis of 18 studies examining the effect of physical exercise interventions on cognition in well older adults found a result in favor of exercise over control activities [Colcombe, S. and A.F. Kramer, 2003]. The findings also indicated that executive cognitive ability showed the largest response to exercise as compared to other cognitive domains (e.g. spatial skills). Gains were also greater for training that lasted 30-45 minutes (versus longer or shorter periods of time) and for older subjects (versus ones that were aged 55-65). A more recent meta-analysis that used a broader set of inclusion criteria (subjects as young as 18 years of age and exercise programs as short as 1 month in duration) included 29 studies with data from 2049 participants [Smith, P.J., et al., 2010]. A significant effect of exercise on a range of cognitive performances (attention and processing speed, executive ability, and memory) was noted though the effect sizes were smaller but that was not unexpected given the inclusion of younger subjects and shorter training programs. **It does seem that physical exercise produces a wide range of positive effects in older adults and those with MCI and these benefits include improved cognitive function.**

Of significant note, exercise improves brain structure as measured by frontal and temporal lobe gray matter volume [Colcombe, S.J., et al., 2006] and neural activation as measured by fMRI [Colcombe, S.J., et al., 2004; Nagamatsu, L.S., et al., 2012]. Aerobic and resistance exercise training have been found to produce improved physical and cognitive performance when compared to control interventions in persons with cognitive impairment as well [Nagamatsu, L.S., et al., 2012 ; Heyn, P., et al., 2004 ; Lautenschlager, N.T., et al., 2012]. **This suggests that exercise actually changes the brain structure in a good way.**

The link between exercise and improved cognition includes activity-induced growth in neurons (neurogenesis).

In a large review of decades of animal research, Kempermann [Kempermann, G., et al., 2010] concludes that adult neurogenesis (the growth of nerve cells in the brain) occurs in an activity-dependent manner and that both physical and cognitive exercises generate nerve growth signals to the brain. Movement stimulates neural precursor cells to multiply while enriched environments (e.g., learning and thinking activities) promote survival of the new cells. Kempermann argues that the notion that physical activity can induce neurogenesis makes sense if one considers that activity is the basis of cognition: "Physical activity is required for providing relevant sensory information to the animal that is then used to construct a representation of the environment" (page 7) in the brain. In this way, locomotion provides the basis

(Continued on page 5)

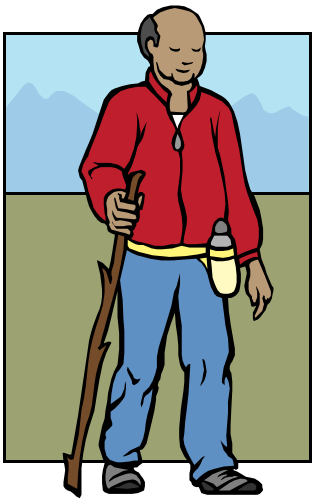
Exercise and Cognition

...Frederick W. Unverzagt, PhD, Professor of Clinical Psychology in Clinical Psychiatry and Professor of Clinical Medical and Molecular Genetics

(Continued from page 4)

for critical cognitively-mediated and survival dependent animal activities like food caching and territory establishment. Indeed, Kempermann makes the case that "... physical activity and its consequences are evolutionarily inseparable from cognition, training to improve cognition will inevitably benefit from, if not depend on, physical exercise" (page 7). Additive effects were demonstrated in an animal study showing that the combination of exercise and enrichment (a surrogate for cognitive training in the human model) produced more neurons in adult mice than either intervention alone with each superior to a "standard" environment [Fabel, K., et al., 2009].

In human studies, exercise increases frontal and temporal lobe gray matter volume [Colcombe, S.J., et al., 2006] and the studies indicating that the exercise effect on cognition may be mediated by changes in brain-derived neurotrophic factor (BDNF) are consistent with the idea that exercise may fundamentally enhance the neural substrate in a way that could maximize the effects of future cognitive stimulation [Voss, M.W., et al., 2011]. Exercise training also appears to alleviate endothelial dysfunction and vascular wall inflammation [Ribeiro, F., et al., 2010]. It seems that the beneficial effects of exercise on cognition may operate through multiple pathways. **Therefore, exercise is a very good thing for the brain.**



Mental Exercise as well as Physical Exercise is needed.

For more information, here is a link to guidelines on Centers for Disease Control (CDC) website for older adults.

http://www.cdc.gov/physicalactivity/everyone/guidelines/olderadults.html

BENEFITS OF PHYSICAL ACTIVITY

Increasing physical activity through walking can help with:

- Decreasing blood glucose levels
- Decreasing systolic blood pressure
- Reducing the risk of coronary heart disease
- Reducing high cholesterol
- Reducing body fat
- Bone density
- Flexibility
- Osteoarthritis

References

1. Colcombe, S. and A.F. Kramer, Fitness effects on the cognitive function of older adults: A meta-analytic study. Psychological Science, 2003. 14(2): p. 125-130.
2. Colcombe, S.J., et al., Cardiovascular fitness, cortical plasticity, and aging. Proceedings of the National Academy of Sciences of the United States of America, 2004. 101(9): p. 3316-3321.
3. Colcombe, S.J., et al., Aerobic exercise training increases brain volume in aging humans. Journals of Gerontology Series a-Biological Sciences and Medical Sciences, 2006. 61(11): p. 1166-1170.
4. Fabel, K., et al., Additive effects of physical exercise and environmental enrichment on adult hippocampal neurogenesis in mice. Frontiers in Neuroscience, 2009. 3.
5. Heyn, P., B.C. Abreu, and K.J. Ottenbacher, The effects of exercise training on elderly persons with cognitive impairment and dementia: A meta-analysis. Archives of Physical Medicine and Rehabilitation, 2004. 85(10): p. 1694-1704.
6. Kempermann, G., et al., Why and how physical activity promotes experience-induced brain plasticity. Frontiers in Neuroscience, 2010. 4.
7. Lautenschlager, N.T., K. Cox, and E.V. Cyarto, The influence of exercise on brain aging and dementia. Biochimica Et Biophysica Acta-Molecular Basis of Disease, 2012. 1822(3): p. 474-481.
8. Li, H.J., et al., Cognitive intervention for persons with mild cognitive impairment: A meta-analysis. Ageing Research Reviews, 2011. 10(2): p. 285-296.

(Continued on page 9)

Reflections
WINTER 2013
Volume 21 Issue 2

Aging, Alzheimer Disease and Driving

.....Mary Guerriero Austrom, PhD,
Wesley P. Martin Professor of Alzheimer Disease Education

Older drivers bring a wealth of experience to the driver's seat; that is why, on average, drivers in their fifties and sixties have just about the lowest crash rates of anyone on the road. However, as some of the skills required for optimal driving performance begin to decline at older ages, research shows that crash rates begin to increase when drivers reach their late 60's or early 70's, and increase more rapidly after age 75. Many drivers' ability and comfort behind the wheel can begin to change around age 55. This is normal since aging affects hearing, vision, distance and depth perception and reaction time. Because of these changes, many older drivers start to change their driving habits around the same time. For example, they may not drive at night as much; avoid driving during rush hour and bad weather or other similar changes.

What happens when an older person's cognitive skills begin to decline due to Alzheimer disease (AD)? One significant symptom of AD is decline in judgment and reasoning skills. A typical driver makes 20 decisions per mile, with less than half a second to act in order to avoid a collision. After all, driving is very complicated. Therefore, as we age and our reaction time slows down, it is understandable that driving may become more difficult. It is not easy to make all of those decisions so quickly. But for a person with AD, decision-making is even more difficult. Indeed, as many family members know, the decline in reasoning and judgment is also why it is often very difficult, if not impossible, to rationally discuss giving up driving with a family member with dementia.

How should one discuss driving with a parent, spouse or other relative?

It is important to understand that driving represents independence to most people so don't think it will be easy to get someone to give up the car keys. Also, many cities do not have adequate public transit so giving up driving really does mean giving up one's independence. On the other hand, if the older person is no longer safe behind the wheel, taking away the keys must be done for their own safety and the safety of others.

Warning signs that can indicate a problem behind the wheel:

- Anxiety, feeling uncomfortable and nervous or fearful while driving.
- Lack of concentration—dents and scrapes on the car or on fences, mailboxes, garage doors, and curbs. Discovering damage on the car that cannot be explained.
- Less control of muscles making it harder to push down on the pedals or turn the steering wheel.
- Medications can also affect the ability to handle a car safely.
- Trouble controlling anger, sadness or other emotions that can affect driving.
- Friends or relatives do not want to get in the car with the older driver.
- Frequent traffic citations or being stopped by the police several times in the last year or two.
- Close calls, almost crashing due to distractions or lack of proper judgment at intersections, in traffic, or on highway entrances/exit ramps.
- Trouble remembering directions and/or getting lost on routes that were once familiar.
- Difficulty turning around to check over shoulder while backing up or changing lanes.
- Slower responses to unexpected situations such as children or animals darting into traffic.

If you suspect a problem with driving, it is important that you get in the car with the older driver and observe them directly. If you are afraid to get in the car with them--that should tell you something.

(Continued on page 7)

Aging, Alzheimer Disease and Driving

.....Mary Guerriero Austrom, PhD,
Wesley P. Martin Professor of Alzheimer Disease Education

(Continued from page 6)

When is the best time to talk about driving with an older person?

The best-case scenario is to have a discussion about driving before it becomes an issue. For example, retirement may be a good time to bring it up. Possible things to discuss with an older driver include: selecting a safer car, planning for getting to and from the grocery, doctors' appointments, social outings, church and so on. Following are some suggestions that may help to begin the conversation:

- Always start difficult discussions by stressing your concern for their well being and base it on things you have observed.
- Acknowledge that driving is important and you want to help them remain as independent and functional as possible.
- Acknowledge the person's strengths. They didn't get this far without the proper driving skills.
- Be positive and supportive, not bossy or critical when discussing driving concerns. It will not help if you alienate them or make them angry.
- Have these conversations early and often.

How does one make the decision to give up driving?

This is an individual decision based on each person's level of decline. There is no one easy answer. It may be easier for some people to give up driving in stages. The following ideas have helped some people ease into giving up the car.

- Reduce driving at twilight and night, during bad weather and during high traffic times.
- Drive only regular, familiar routes in the middle of day.
- Help them plan a route and have them stick to it.
- Enlist the help of other family members, friends and neighbors—have a driving schedule.
- Encourage carpooling.
- Have your doctor write a prescription that says "no more driving."
- Walk or take public transportation with them. If they see you doing it, they may be more likely to follow.
- Some families have found that selling the car made it easier but others have reported that getting rid of the car too early was a mistake. Assess the situation carefully and remember, you know your older driver the best.
- Register in the Alzheimer's Association Medic Alert / Safe Return program. Call 1-800-272-3900 for details.

Recommended Resources: *(more on page 9)*

Alzheimer's Association Medic Alert / Safe Return 1-800-272-3900

The Veterans' Administration (VA) Safe Driving Initiative involves both an information campaign and a strategic research plan. Download the Veterans' Safe Driving Initiative Brochure **http://www.safedriving.va.gov/docs/safe_driving_brochure.pdf**. The VA website also provides links to other specific driving resources from the Department of Transportation and FDA at **http://www.safedriving.va.gov/resources/driving.asp.**

Easter Seals Crossroads Drivers Program (Indianapolis, IN) 317-466-1000

AARP Driver Safety Classes 800-350-7025 **www.aarpdriversafety.org** -or- 877-846-3299 to find a driving course near you.

Welcome to New Faculty and Staff

Dr. Adrian Oblak

Dr. Adrian Oblak came to Indiana University School of Medicine in October 2012 from Boston. After completing her undergraduate degree from Allegheny College (Meadville, Pennsylvania) in Neuroscience and Psychology, she was accepted into the Anatomy and Neurobiology Ph.D. program at Boston University School of Medicine. During her Ph.D. training she studied the neuroanatomical and neurochemical alterations in the cingulate cortex and fusiform gyrus in autism. Dr. Oblak began to explore her interests in the aged brain during her post-doctoral fellowship also at Boston University School of Medicine in the Laboratory of Cognitive Neurobiology. During her time there she studied a non-human primate model of "normative aging" and stroke. Her research interests include brain development and the neuroanatomy and neuropathology of neurodegenerative diseases. Methods of interest include in vivo and ex vivo tract tracing studies that link regions of the cerebral cortex in normal and pathological conditions; and structural (MRI) and functional imaging (PET and fMRI) of the cerebral cortex to better understand the organization of the human brain and the consequences of pathology on higher order behaviors. In addition to cortical connections, Dr. Oblak is interested in the connections of different cortical association areas with each other, with subcortical structures such as thalamus and basal ganglia, and the organization of the white matter tracts that link different brain regions. This work has potential to shed new light on cortical and subcortical systems affected by neurodegeneration. Dr. Oblak joins the faculty at IUSM as a Visiting Assistant Research Professor in the Department of Pathology and Laboratory Medicine. ¤

Donna Wert

Welcome also to Donna Wert, a new member of the Indiana Alzheimer Disease Center (IADC) team where she will be serving as Data Coordinator. Donna began working half time last March as the Education Assistant to the IADC Education Core and has recently added the Neuropathology Core to her list of duties changing to full-time status. Be sure to stop and visit her at the IADC table at local health fairs or conferences. We wish her a warm welcome to the IADC family! You can contact Donna by email at dwert@iupui.edu or at **317-963-7297.**

BOOKS AND RESOURCES FOR THE CAREGIVER...

RESOURCES FOR DRIVING:

Rehabilitation Hospital of Indiana's Return to Driving program is dedicated to promoting safety and independence in driving. Their specially trained occupational therapists' use vehicles with state-of-the-art adaptive equipment and computer systems to address the visual, cognitive, and physical impairments that affect an individual's ability to drive. Visit **http://rhin.com** or call 317-329-2000.

The following booklets are available from the AAA Foundation (American Automobile Association) by calling 1-800-993-7222 or by visiting their website at **www.aaafoundation.org/store**.

Drivers 65 Plus: Test Your Own Performance (A Self-Rating Form of Questions, Facts and Suggestions for Safe Driving). The short questionnaire tests important driving-related skills. Intended for drivers over 65, the booklet suggests measures to cope with any revealed deficiencies.
https://www.aaafoundation.org/sites/default/files/driver65.pdf.

How to Help an Older Driver (A guide for Planning Safe Transportation) is only available by downloading at **https://www.aaafoundation.org/sites/default/files/ODlarge.pdf**

The Older and Wiser Driver
https://www.aaafoundation.org/sites/default/files/older%26wiser.pdf

Road Rage (How to Avoid Aggressive Driving)
https://www.aaafoundation.org/sites/default/files/RoadRageBrochure.pdf

www.roadwiserx.com allows you to type in the name of a specific medication to see how it may affect your driving.

The web sites contain much more information than we can include here. Surf the net and find some useful information.

HELPFUL LEGAL RESOURCES:

Here's a link to a new non-profit public interest law firm, The Center for At-Risk Elders -- www.indianacare.org <http://www.indianacare.org>

Information on how to find an elder law attorney, and other useful information about elder law: www.naela.org <http://www.naela.org>

Information about The Consumer Voice, which is the national group advocating on issues of long term care: www.theconsumervoice.org <http://www.theconsumervoice.org>

Information about The Center for Medicare Advocacy, which is the preeminent national consumer advocacy group around Medicare issues, and which are always willing to answer questions on Medicare topics: www.medicareadvocacy.org <http://www.medicareadvocacy.org>

Please note that the resources listed here are not owned or managed by the IADC and the IADC cannot be not responsible for their content. The IADC is providing these resources for information and convenience. All resources should be used with discretion.

(Continued from page 5) *Exercise and Cognition References*

9. Nagamatsu, L.S., et al., Resistance Training Promotes Cognitive and Functional Brain Plasticity in Seniors With Probable Mild Cognitive Impairment. Arch Intern Med, 2012. 172(8): p. 666-668.
10. Ribeiro, F., et al., Is exercise training an effective therapy targeting endothelial dysfunction and vascular wall inflammation? International Journal of Cardiology, 2010. 141(3): p. 214-221.
11. Smith, P.J., et al., Aerobic Exercise and Neurocognitive Performance: A Meta-Analytic Review of Randomized Controlled Trials. Psychosomatic Medicine, 2010. 72(3): p. 239-252.
12. Voss, M.W., et al., *Exercise, brain, and cognition across the life span.* Journal of Applied Physiology, 2011. **111**(5): p. 1505-1513. ¤

Reflections
WINTER 2013
Volume 21 Issue 2

IADC Current Studies on AD and Related Disorders Research Enrolling Participants

Who is needed?	For which study?	Length of study?	Please contact…
To participate, volunteers must have a diagnosis of one of the following: • Probable Alzheimer Disease • Mixed Dementia • Mild Cognitive Impairment • Vascular Dementia • Lewy Body Disease • Parkinson Dementia • Frontotemporal Dementia	This Registry/database is used to capture data for self-referred volunteers and established clinic patients who have interest in participating in various clinical research studies, including drug studies now and in the future.	Information regarding research projects will be disclosed prior to enrollment in specific research studies. Length varies by individual study.	Christina Brown 317-963-7426 chbrown@iupui.edu
Navidea Protocol Number NAV4-01 • Healthy Volunteers • 18-40 or 55-85 –or- • Probable AD subjects 55 yrs. young or older, with a MMSE score of 16 - 23 • Able to undergo PET scans an MRI	Research study for the investigational drug [^{18}F] AZD4694 used in positron emission tomography (PET) brain imaging. [^{18}F]AZD4694 binds to beta amyloid that can be seen in PET images. If beta amyloid deposits are present in the brain, this might help a doctor to make a diagnosis.	• There are approx. 4 visits within 38 days. • Tests, procedures, and exams provided at no cost. • Compensation for time and travel provided.	Nancy McClaskey, RN 317-963-7429 or Christina Brown 317-963-7426
Biogen Idec Protocol Number 221AD103 • Men and women in good health; • 55-90 years young; • Early or Mild AD diagnosis; • MMSE score between 20-30; • Able to undergo MRI and PET scans; • Reliable caregiver or informant who will accompany subject to study visits.	A research study to assess the safety and effectiveness of a new drug (BIIB0237) for treatment of AD	• Approximately 11 visits within 36 weeks. • Medication, testing, procedures, and exams provided at no cost. • Compensation for time and travel provided.	Nancy McClaskey, RN 317-963-7429 or Christina Brown 317-963-7426

Who is needed?	For which study?	Length of study?	Please contact…
Participants need to: • Have a first degree relative with Alzheimer disease caused by a known mutation. • Be at least 18 years of age. • Speak and read English. • Have someone who knows them well be willing to answer questions about their memory and thinking.	Dominantly Inherited Alzheimer Network (DIAN)	• Longitudinally, visiting every 1-3 years, as long as the person is willing. • Visits include: neurological exam, cognitive evaluation, PET and MRI imaging, informant interview, blood draw and spinal tap. • Compensation for travel, meals, accommodation, and completion of some procedures is available.	Francine Epperson 317-274-1590 freppers@iupui.edu
If your family has two or more living members with Alzheimer's disease or symptoms of serious memory loss, researchers may be very interested in studying your family. We are eager to involve new families from every location.	The National Cell Repository for Alzheimer's Disease (NCRAD)	• Longitudinal; over a lifetime or as long as person is willing. • Visits are done by telephone or mail.	National Cell Repository for AD 1-800-526-2839 alzstudy@iupui.edu
Qualifying families with 3 or more living siblings diagnosed with probable AD.	The Genetics of Late Onset Alzheimer's Disease (LOAD) Study	• Longitudinal; over a lifetime or as long as person is willing. • Visits include: neurological exam, cognitive evaluation, informant interview and provide a blood sample for DNA at first visit.	National Cell Repository for AD 1-800-526-2839 alzstudy@iupui.edu
Healthy Older adults • With mild to moderate memory difficulties • 60 years of age + • Right-Handed • Completed at least 10th grade of education	Study of memory in health older adults. Study includes a brain scan, blood draw, eye exam and cognitive testing	• 3-year study • 3 assessments 18 months apart. • Each visit is 7-8 hours and can be scheduled over 2 days. • Compensation for time and effort provided.	Eileen Tallman 317-278-3121 etallman@iupui.edu

Looking for Persons with Mild Cognitive Impairment and Their Family Members to Participate in a New Research Project

Indiana University School of Nursing faculty member and scientist, Dr. Yvonne Lu, has been awarded a new grant titled the Daily Enhancement of Meaningful Activity. Interviews begin soon to recruit adults with mild cognitive impairment, along with a family caregiver to participate in this study. We are looking for 72 participants -- 36 persons with MCI and 36 caregivers.

What is the purpose of this study?

This study will help us determine the best ways to provide the Daily Enhancement of Meaningful Activity (DEMA) program to persons with mild cognitive impairment and their family members. We will evaluate how well DEMA works in increasing participants' satisfaction with the DEMA program and in helping them to cope with memory problems.

Who can participate?

Any adult, aged 50 years or over, with a diagnosis of mild cognitive impairment, who is able to read and speak English, and being supported by an adult family member who is also able to read and speak English can participate--both would participate in the study.

What is MCI?

"Mild cognitive impairment (MCI) is a condition in which a person has problems with memory, language, or another mental function severe enough to be noticeable to other people and to show up on tests, but not serious enough to interfere with daily life and does not constitute full-blown dementia" (www.alz.org).

What does the project involve?

The project involves participating in a 3-month skill-building and health promotion program, which includes 2 face-to-face sessions and 4 telephone sessions, all of which will be arranged for at your convenience. During the face-to-face sessions, you will meet with the research staff in a private room on the IUPUI campus. You will also participate in three study-related telephone interviews. Total time involvement will be a few hours per week for six (6) months.

What are the benefits?

Taking part in a skill-building program can help participants learn about important things they can do to manage the symptoms of MCI and stay engaged in meaningful activities. Your participation in the project and the information you provide will help us a great deal in improving the program.

Each participant will receive up to $60 in gift cards for their participation and completion of the study. Parking passes will be provided for the face-to-face sessions on the IUPUI campus.

For more information or to volunteer to participate, contact:

Yvonne Lu, RN, PhD
Indiana University School of Nursing and the Indiana Alzheimer Disease Center
317-278-2042
yuelu@iupui.edu

A brief telephone interview will determine if you meet the eligibility criteria.

Some of our Cores have moved to new Neuroscience Center

IU Health Neuroscience Center – Goodman Hall

A new era in neurological care in Indiana arrived when the new Indiana University (IU) Health Neuroscience Center officially opened its doors to patients. Here, highly skilled physicians and researchers work together to deliver well-coordinated care for the full range of neurological disorders—everything from Alzheimer disease and brain tumors, to spinal conditions, epilepsy and stroke.

This center, located just south of IU Health Methodist Hospital, will serve as a convenient "one-stop shop" for people, combining the collective resources of IU Health and IU School of Medicine into a single facility.

Phase I of the center, an ambulatory care and imaging facility, opened in August 2012. Here, patients can see all their specialists and receive all their diagnostic imaging in a single visit. Phase II, an innovative research facility led by the IU School of Medicine, is scheduled to open in 2014, and will enable patients to have easier, faster access to clinical trials and breakthrough treatments.

This new center, combined with nationally ranked expertise and a recent expansion of the neurosurgical suites at IU Health Methodist Hospital, enables us to continue providing superior neurological care and treatment. ⌑

Indiana University Health Neuroscience Center
Goodman Hall
355 W. 16th Street
Indianapolis, IN 46202-7176
(across from IU Health Methodist Hospital)

The IADC Administrative and Neuroimaging Cores
Indiana University Health Neuroscience Center
Goodman Hall, Suite 4100
355 W. 16th Street
Indianapolis, IN 46202-7176
Tel: 317-963-7229 Fax: 317-963-7547
Website: iadc.iupui.edu

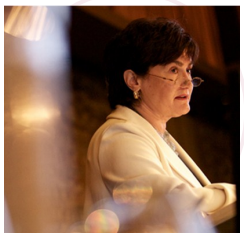
The IADC Clinical Core
Indiana University Health Neuroscience Center
Goodman Hall, Third Floor
355 W. 16th Street
Indianapolis, IN 46202-7176
Tel: 317-963-7426 Fax: 317-963-7533

The IADC Neuropathology Core
Indiana University School of Medicine
635 Barnhill Drive, MS A143
Indianapolis, IN 46202
Tel: 317-278-8457 Fax: 317-274-4882

The IADC Data Management Core
Indiana University School of Medicine
Department of Biostatistics
410 West 10th Street, Suite 3000
Indianapolis, IN 46202-3002
Tel: 317-274-0820 Fax: 317-274-2678

The IADC Education & Info Transfer Core
Indiana University Health Neuroscience Center
Goodman Hall, Suite 2800
355 W. 16th Street
Indianapolis, IN 46202-7176
Tel: 317-963-7297 Fax: 317-963-7325

Frederick W. Unverzagt, PhD
Professor of Psychiatry
Director, Clinical Neuropsychology Residency
Goodman Hall, Suite 2800
355 W. 16th Street
Indianapolis, IN 46202-7176
Tel: 317-963-7300 Fax: 317-963-7325
email: funverza@iupui.edu



Out and About with the IADC Education and Information Core…

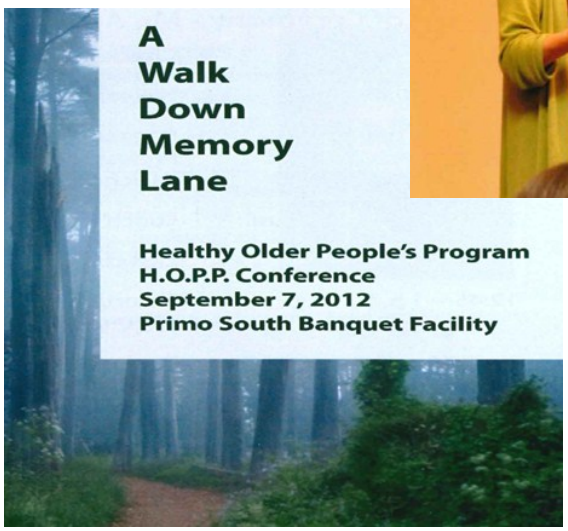
Perhaps we ran into you this past fall. The Education and Information Transfer Core (EITC) coordinates educational programs for many audiences, from our own research participants and their family members, to medical students first learning about Alzheimer disease (AD), to residents and fellows rotating through the clinics on campus, to faculty and staff of Indiana University, to professionals in our local community and throughout the state and beyond. The EITC plays an important role by linking the Indiana Alzheimer Disease Center (IADC) to the wider community and other organizations, such as the Alzheimer's Association of Greater Indiana, the Area Agencies on Aging, and health care providers throughout the state and the region. The success of the EITC is only possible through the involvement of the faculty and staff from all of the other IADC cores. For example, the EITC works closely with the Clinical Core to recruit and retain participants for research and with the Administrative Core in developing and organizing the annual symposia on AD. The EITC also publishes *Reflections*, the IADC newsletter, as well as other helpful information about AD and related dementia.

Above:

Dr. Mary Austrom speaking at the 2012 Alzheimer's Association International Conference (AAIC) in Vancouver, British Columbia, Canada.

Right:

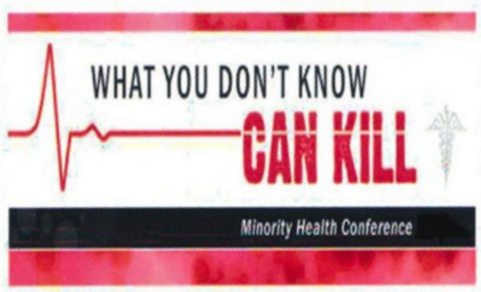
Dr. Mary Austrom speaking at the local H.O.P.P. Conference. Interpretation for the Hearing Impaired was provided.



If you would like to learn more about the IADC, its research programs, opportunities for getting involved in research or would like to schedule an educational program please contact Dr. Mary Guerriero Austrom at maustrom@iupui.edu or Mrs. Donna Wert at dwert@iupui.edu or call 317-963-7297.

Out and About with the IADC Education and Information Core...

(continued from pg 10)

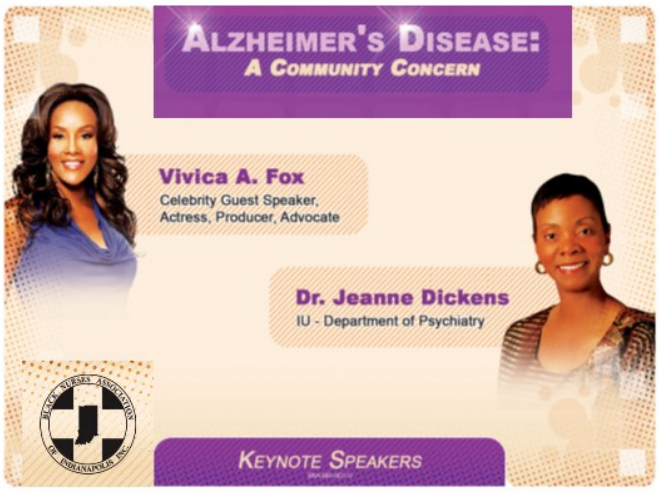


IN Health Department's Office of Minority Health
4th Annual -September 13-14, 2012

1st Latino Health Fair
September 22, 2012

On October 26, 2012, at the Chase Near Eastside Legacy Center, Congressman Andre Carson was on hand to share information regarding the Affordable Care Act and benefits provided to seniors at his first annual Community Health Fair. The event, sponsored in cooperation with the Minority Health Coalition of Marion County, provided Health Screenings and Educational Workshops. Our Clinical Core staff was there to answer questions about AD and provide information on our current research studies.

On October 27, 2012, the Black Nurses Association of Indianapolis, Inc. hosted it's 8th Annual Fundraiser to bring awareness regarding health disparities which affect our communities as well as provide financial support to local charities which are in line with their mission. This event focused on Alzheimer disease (AD) and it's increase across the country especially in racial and ethnic minority populations. African Americans and Hispanic/ Latino populations are disproportionately affected by AD as well as other dementias in comparison to non-minorities. The Indiana Alzheimer Disease Center was selected as one of the honorees at the dinner. Read more at www.bna-indy.org.



Save the Date…Note the Changes

Caregiver Support Group Available:

…NOTE the change of address.

Are you caring for a family member or friend with AD, dementia or related disorder? Do you have questions or concerns about providing care, about AD or other dementia? Our support group meeting may be your answer. The IADC together with the Healthy Aging Brain Center and the Alzheimer's Association, facilitates a monthly support for caregivers. All family members are welcome.

The meeting is held on **the 4th Friday of each month from 1:00—3:00 pm.** We now meet at **Cottage Corner Health Center, 1434 S. Shelby St, Indianapolis, IN (317.655.3200).** Feel free to join for education and social support.

Link to our Calendar:
http://iadc.iupui.edu/current-events/151/

FTD Caregiver Support Group

(recently formed)
Has a loved one been diagnosed with frontotemporal dementia (FTD)?
Do you have questions about the disease and how to manage it?
You are not alone.

IADC FTD Caregiver Support Group meets the **2nd Tuesday of each month from 6:30–8:30 pm.** at **Indianapolis First Friends Church, 3030 Kessler Boulevard East Dr., Indianapolis, IN.**

IADC presents the 5th Annual Memory University

"When It's Not Memory"

Thursday afternoons, June 6th-13th-20th-27th, 2013, from 1pm-3pm.
NOTE: Change of Location!
IU Health Neuroscience Center, Goodman Hall Auditorium
355 W. 16th Street, Indianapolis, IN 46202
This is designed for family caregivers and community-based health care providers.
Look for more information soon on our website.

Plans for the 2013 IADC Symposium are under construction now. The two day event will not be back-to-back as in past years. The scientific symposium will be held on June 8, 2013 and the Martin Family Caregiver Alzheimer Disease Symposium is scheduled for September 20, 2013. Please continue to check the website as details and updates will be added regularly.

IADC Annual Spring Symposium
Dementia: Risk Factors, Transition and Translation

Saturday, June 8, 2013
Riley Outpatient Center Auditorium
Riley Hospital for Children at Indiana University Health
705 Riley Hospital Drive
Indianapolis, IN 46202
Course Directors: Bernardino Ghetti and Gregory A. Jicha

Look for more information soon on our website.
http://iadc.iupui.edu/current-events/

IADC 7th Annual Martin Family Alzheimer Disease Symposium
"Mind Your Health and Exercise Your Brain"

Friday, September 20, 2013
Goodman Hall Auditorium
IU Health Neuroscience Center
355 W. 16th Street
Indianapolis, IN 46202
Course Directors: Mary Guerriero Austrom & Brandy Matthews

Look for more information soon on our website.
http://iadc.iupui.edu/current-events/

For more information on any of the events above, or to be added to our mailing list, please contact the Education Core at 317.963.7297; email dwert@iupui.edu, or check our website: iadc.iupui.edu.

In Memory….

The Indiana University Alzheimer Disease Research Fund gratefully thanks and acknowledges the following individuals for their generous contributions from May 1, 2012 to January 31, 2013.

In memory of James D. Baity
Kayle Hodge
On behalf of Kayle Hodge,
Tiffany Baity and James Baity

In memory of Mildred Burch
William and Terri Luke

In memory of Jerry Clay
Francis and Phyllis Newton

In memory of William N. Eckstein
Ida Shadonix

In memory of James E. Goff
Emily M. Goff and the
EMG & JEG JT Rev Living Trust

In memory of Ruth S. Hardy
Amanda & Brent Euen
Harry H. Hardy
Jessie Greenberg & James S. Hardy
Nancy and Charles O. Hardy
Timothy and Melody Hardy
Donna & Eugene Kanaan
Hugh and Nancy Laughlin
Mitzi Lewison
Mary & John Rucker
Jack J. and Kristin M. Steiner
Robert and Nancy Wylie

In memory of Donald L Haycox
Anthony and Kendra Albright

In memory of Catherine M. Karl
Janet K. and James L. Boyce

In memory of Rebecca Leonard
on behalf of Katherine Fry,
Catherine and Gary Gardner

In memory of Dr. William G. Taaffe, D.O.
Pat and Bruce Biery

Donor:
Mildred S. George MacDonald

Donations to this fund are a wonderful way to remember or honor a loved one and contributions are 100% tax deductible. Your contributions are gratefully accepted and are used to further research and education in Alzheimer disease.

Please make checks payable to:

Indiana Alzheimer Disease Center Fund

c/o Indiana University Foundation
P. O Box 660245
Indianapolis, IN 46266-0245

Call (317) 278-8480 for information on making a bequest or planned giving to this fund.

Reflections is published by the Indiana Alzheimer Disease Center

Administrative Core Leader:
Dr. Andrew Saykin
Clinical Core Leader:
Dr. Martin R. Farlow
Neuropathology Core Leader:
Dr. Bernardino Ghetti
Data Management Core Leader:
Dr. Sujuan Gao
Education & Information Transfer Core Leader:
Dr. Mary G. Austrom
Neuroimaging Core Leader:
Dr. Andrew Saykin

EDITOR
Mary Guerriero Austrom, PhD

CO-EDITORS
Bernardino Ghetti, MD
Brandy R. Matthews, MD
Andrew Saykin, PsyD

EDITORIAL ASSISTANT
Donna Wert

Contributors in this issue:
Mary Guerriero Austrom, PhD
Clinical Core Staff
Yvonne Lu, RN, PhD
Brandy Matthews, MD
Andrew Saykin, PsyD
Frederick W. Unverzagt, PhD

The editor welcomes your comments and letters
maustrom@iupui.edu or dwert@iupui.edu