OUR MISSION AND WORK

WHAT WE DO

Thank you for your interest in our work and for supporting our mission!
We are cognitive neuroscientists at the University of California, Irvine, interested in the effect of brain training on cognitive performance in older adults. We have developed a neuro-scientific method for training basic cognitive skills to affect memory and thinking ability with the potential for positive effects on daily life functioning and mitigating age-related cognitive decline.

If you have participated in any of our studies, we’d like to take this opportunity to say **THANK YOU!**
Your participation is valuable to us and to society in general; without it, we couldn’t learn about and develop our brain training games, or discover the mechanisms behind them, and the factors that might promote successful aging.

Thank you for your time, effort, and participation.

WHAT WE CAN OFFER

We can provide workshops and presentations on our work, or, more generally, on lifelong learning, cognitive development, and aging for the interested general public, parents, teachers, schools or other organizations.

We offer free access to our training software for participating organizations and individuals, and furthermore, we acknowledge the organizations’ and participants’ contribution in scientific publications.

CONTACT US

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WHAT WE HAVE FOUND

Our training methods focus on sharpening important memory functions that facilitate our ability to process information more easily and more efficiently. Here are some of the key findings that we have found to be important for training success and that are applicable to other cognitive activities as well:

The more you train, the more you improve (Stepankova et al., 2014). Furthermore, the phrase “use it or lose it!” applies to our mind as well. To use the analogy of physical exercise, you cannot go on one walk and expect to still see effects years later. Cognitive strength, just like physical strength, must be continually maintained in order to prevent decline.

Training well and being engaged during cognitive activities are important features for training success (Jaeggi et al., 2011). That is, you really need to put effort into training in order to see gains (Jaeggi et al., 2014). Indeed, those who do not improve during training (orange curves) tend to have smaller cognitive benefits than those who do improve (blue curves).
WHAT CAN YOU DO?

COGNITIVE ENGAGEMENT
Studies have demonstrated that engaging in challenging mental activities can improve and maintain brain functioning. Playing puzzle games, participating in plays, reading, and generally engaging in novel tasks that require creative problem solving are best. You want to look for activities that force you to use your attention and concentration skills, and to actively think and reason in new ways, not just recall previously known information. Trying new things is also an important part of keeping your mind sharp. Taking classes or learning a new skill, for example, photography, quilting, a foreign language, to play bridge, or a musical instrument are valuable ways to maintain cognitive functions (Park et al., 2014). You are never too old to learn something new!

For local class listings, check out:
Osher Lifelong Learning Institute: ce.uci.edu/oll/
Saddleback CC: www.saddleback.edu/emeritus
IVC CC: http://academics.ivc.edu/emeritus/

PHYSICAL EXCERCISE
Mental and physical health are interconnected. Research has shown that exercise and regular physical activity can improve cognitive function and promote brain health (Erickson et al., 2014). Especially activities that are good for your heart, such as walking (especially in nature; Kardan et al., 2015), gentle aerobics, swimming, but also climbing stairs, dancing, or even house- and yardwork are beneficial for both your physical and mental health.

SOCIAL INTERACTION
Studies have shown that positive social interaction is related with improved cognitive function in old age (Ybarra et al., 2008). Activities such as spending time with your family, grandchildren and great-grandchildren, but also participating in clubs, walking groups, or being engaged in meaningful volunteer and community work can be beneficial for your cognition (Harris & Thoresen, 2005, Paganini-Hill et al., 2011).

BALANCED DIET
Research has shown that a Mediterranean-style diet, rich in vegetables, legumes, fruits, whole grains, nuts, fish, and olive oil, that also includes coffee and wine in moderation is linked to overall brain health and longevity (Lourida et al. 2013).

PUTTING IT ALL TOGETHER

There are lots of factors that contribute to successful aging. Unfortunately, some aspects of aging are inevitable, and furthermore, there are certainly genetic and other factors that are not under your control. However, there are things that you can do, such as engaging in physical and cognitive activity, interacting socially, and keeping a healthy diet. These areas work together to promote and maintain your brain health. Finally, make sure to get regular checkups and that you practice safety habits to avoid accidents and prevent falls.

The 90+ study initiated UC Irvine (UCI MIND) has investigated lifestyle factors that are related to lower risk of dementia in the oldest old, and their findings are consistent with the information provided here.
Learn more about the 90+ Study on 60 Minutes: https://vimeo.com/141701928
HOW CAN YOU HELP?

PARTICIPATE IN ONGOING RESEARCH

Donating your time to participate in scientific research is a great way to stay engaged and also help others by contributing to advance science. We are always looking for participants who are interested to get involved and train their brain.

If you or someone you know are interested in participating in a study with us, contact the Working Memory and Plasticity Lab at (949) 824-2439 or uciwmplab+oam@gmail.com.

Currently, we are interested in the effects of Transcranial Direct Current Stimulation (tDCS) on cognitive training in older adults. tDCS uses mild, electrical stimulation to the scalp to temporarily increase the plasticity of certain regions of the brain. We hope this can help with long-term learning and memory retention.

OTHER UCI STUDIES RECRUITING SENIORS

Stark Lab: Dane Clemenson
starklab.videogames@gmail.com

Yassa Lab: Elizabeth Murray eamurray@uci.edu
(949) 824-0314

UCI MIND: research@mind.uci.edu
(949) 824-0008
https://www.mind.uci.edu/research-studies/participate/

The 90+ Study
(949) 768-3635 or study90@uci.edu
https://www.mind.uci.edu/research-studies/90plus-study/

You can also search the National Institutes of Health’s listing of ongoing local clinical trials at www.clinicaltrials.gov

DONATE

Thank you for your interest in supporting our research. Your philanthropy is very important and allows us to fulfill our mission to improve educational outcomes and lifelong learning for everyone – from young children to the oldest-old.

To discuss opportunities for gifts and donations to directly support the Working Memory and Plasticity Lab or the School of Education, call Jennifer Stameson, Director of Development, (949) 824-1962, or jastames@uci.edu.

Alternatively, consider the

UC Irvine Center for the Neurobiology of Learning and Memory
http://www.cnlm.uci.edu/gifts/

UC Irvine Institute for Memory Impairments and Neurological Disorders (UCI MIND)
Linda Scheck, Director of Development, (949) 824-3251 or lscheck@uci.edu.
https://www.mind.uci.edu/donate/

BECOME AN ADVOCATE

Search for an event in your area or find out how to get involved:

Participate in Walks to End Alzheimer’s
https://act.alz.org/site/SPageServer/?pagename=walk_homepage#searchbox

Participate in Brain Awareness Week
http://www.dana.org/BAW/

Advocate for older adults and organizations that serve them:

National Council on Aging:
https://www.ncoa.org/public-policy-action/

Action and Advocacy Toolkit:
https://www.ncoa.org/public-policy-action/advocacy-toolkit/

Call your representative to emphasize the importance of scientific research and aging!
Find your representatives at www.house.gov

Working Memory and Plasticity Lab, UC Irvine - http://wmp.education.uci.edu/
WHERE TO LEARN MORE

ASSOCIATIONS

National Institute on Aging
www.nih.gov/nia
For specific NIH resources on healthy aging, visit https://medlineplus.gov/healthyaging.html

California Department of Aging
http://www.aging.ca.gov

American Institutes for Research – Center on Aging http://www.air.org/center/center-aging

AARP
www.aarp.org

MacArthur Foundation Research Network on an Aging Society
https://www.macfound.org/networks/research-network-on-an-aging-society/

The Dana Foundation
www.dana.org

Alzheimer’s Association
https://www.alz.org

BOOKS & RESOURCES


Even though some of the material is specific to Scotland, the following handbook is a great resource based on the work by Dr. Bob Woods: Promoting psychological well-being for people with dementia and their carers: An enhanced practice resource (2012): http://www.nes.scot.nhs.uk/media/1559931/enhanced_resource_fullv2.pdf

The Dana Foundation has published a comprehensive booklet on Successful Aging: https://www.dana.org/SuccessfulAgingPDF/

SCIENTIFIC REFERENCES CITED HERE


Working Memory and Plasticity Lab, UC Irvine - http://wmp.education.uci.edu/