

Why Memory Enhancement is Effective

The brain has "plasticity" or neuroplasticity." This means that the brain is constantly changing and adapting. The brain's tremendous compensatory abilities enable it to make up for damages or illness by creating new neural connections and rewiring existing ones.

Michael Merzenich, Ph.D., a neuroscientist at the University of California, San Francisco, says that the brain is a learning machine. (Mercola 2012) He points out that performing activities and exercises that engage your focus will click your brain into learning mode and therefore kick it up a notch.

Dr. Daniel Amen, brain disorder specialist, Director of Amen Clinics, and a New York Times bestselling author, points out that a lack of new learning opportunities will result in diminished cognitive capacity. (Amen 2013) Like a muscle, the brain weakens without use, and is strengthened though exercise. Improving the brain with new and different challenges helps to keep the brain robust and healthy, and builds up the brain's cognitive reserve.

A cognitive reserve is a storehouse of mental abilities that can compensate for mental deficits. Keeping your brain active and engaged—through brain exercises, mental activities, and social interaction—develops cognitive reserve. Studies show that people with a rich cognitive reserve are less likely to manifest symptoms of dementia. (Botek 2014)

IMEP is effective because:

It puts these scientific findings to use. Through brain games, cognitive training, mental agility exercises and new learning experiences, participants strengthen their cognitive reserve, which can help improve overall brain function.

It addresses individuals holistically—as a whole system instead of individual parts. Incorporating program components that support total brain and body health yields the best results overall, starting with fundamentals such as: adequate hydration, healthy breathing practices, posture awareness, and relaxation.

It provides socialization. A recent study published in the Journal of the International Neuropsychological Society showed that the most socially active seniors had a 70% reduction in their rate of cognitive decline compared with their less social peers. (Szalavitz 2011) IMEP encourages and fosters social interactions and engagement with peers, and offers the dynamics of an interactive and supportive group setting.



COUNCIL ON AGING OF MARTIN COUNTY, INC.

900 SE Salerno Road | Stuart, FL 34997 | 772.223.7843 | www.kanecenter.org



Bibliography*

Alzheimer's Association Website. Alzheimer's Disease. http://www.alz.org/alzheimer's disease 1973.asp.

Amen, Daniel G., MD. 2013. *Brain Robbers*. The Daniel Plan Online/Healthy Habits. http://danielplan.com/healthyhabits/brain-robbers/.

Atienza, Herbert and Yuen, Nancy. 1 May 2014. *National Media Covers LLUH Laughter Studies*. Loma Linda University Health News of the Week. http://myllu.llu.edu/newsoftheweek/story/?id=16173.

Bellevue College Continuing Education, 2014. Latest News & Trends. Lifelong Learning Benefits Body, Mind & Career, 2014. http://www.bellevuecollege.edu/ce/lifelong-learning-benefits-body-mind-and-career/.

Berkman, Lisa F., PhD; Ertel, Karen A.; and Glymour, M. Maria, ScD. 2008. Effects of Social Integration on Preserving Memory Function in a Nationally Representative US Elderly Population. American Journal of Public Health Online. 98(7): 1215-1220. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2424091/.

Block, Pat, NC. 16 November 2011. *Tapping Exercise — Why and How To*. Health Parameters Website. http://health-parameters.com/posts/tapping-exercise-why-and-how-to/.

Boddicker, Carson, 16 August 2013. Livestrong.com. *Brain Derived Neurotrophic Factor & Exercise*. http://www.livestrong.com/article/214646-brain-derived-neurotrophic-factor-exercise/.

Borten, Kate, CISSP, CISM. 2013. HIPAA Handbook for Healthcare Staff. p. 6. Massachusetts: HCPro, Inc.

Botek, Anne-Marie. 2014. Cognitive Reserve: The First Line of Defense Against Dementia. Agingcare.com Online Article. http://www.agingcare.com/Articles/cognitive-reserve-avoid-dementia-symptoms-150033.htm.

Center for Brain Health. 12 November 2013. Study Finda Aerobic Exercise Improves Memory, Brain Function and Physical Fitness. University of Texas at Dallas/Center for Brain Health Website. http://www.brainhealth.utdallas.edu/blog page/study-finds-aerobic-exercise-improves-memory-brain-function-and-physical-fi.

Cire, Barbara. 13 January 2014. Cognitive Training Shows Staying Power. National Institute on Aging Website. www. nia.nih.gov/newsroom/2014/001/cognitive-training-shows-staying-power.

Coyle, JT. 19 June 2003. Use It or Lose It — Do Effortful Mental Activities Protect Against Dementia? The New England Journal of Medicine. 2489-2490, Vol. 348 No 25. http://www.nejm.org/doi/full/10.1056/NEJMp030051.

Dennison, Paul E. and Gail E. 2007. *Brain Gym 101 Balance for Daily Life*. Third Edition. Brain Gym International/Educational Kinesiology Foundation. Page 3. Ventura, CA: Edu-Kinesthetics, Inc.



900 SE Salerno Road | Stuart, FL 34997 | 772.223.7843 | www.kanecenter.org



Education Portal Website. 23 September 2010. Music and the Brain: Listening to Music could Help You Learn. http://education-portal.com/articles/Music_and_the_Brain_Listening_to_Music_Could_Help_You_Learn.html.

Hart, Heather, MA, CCC/SLP.21 October 2014. Benefits of Pet Therapy for the Elderly. Liberty Health care and Rehabilitation Services. Bermuda Commons Nursing and Rehabilitation Center. http://www.libertyhealthcareandrehab.com/bermudacommons/2011/10/21/benefits-of-pet-therapy-in-the-elderly/.

Hearn, Merlin. 2013. Water and Brain Function: How to Improve Memory and Focus. Water Benefits Health Website. http://www.waterbenefitshealth.com/water-and-brain.html.

Henderson, William. Accessed 7 July 2014. Neurologic Advantage to Actively Stretching. AZ Central a Gannett Company; Demand Media Webpage. http://healthyliving.azcentral.com/neurologic-advantage-actively-stretching-13704.html.

Jabr, Ferris. October 15, 2013. Why Your Brain Needs More Downtime. Scientific American. http://www.scientificamerican.com/article/mental-downtime/.

Kawashima, Ryuta. 30 January 2013. Mental Exercises for Cognitive Function: Clinical Evidence. Online Journal of Preventative Medicine and Public Health. 46 (Suppl 1): S22-27. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3567314/.

Levy, Becca R. and Leifheit-Limson, Erica. 24 March 2009. National Center for Biotechnology Information, U.S. National Library of Medicine. Abstract: The Stereotype-Matching Effect: Greater Influence on Functioning When Age Stereotypes Correspond to Outcomes. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2722449/.

Melone, Linda. 2014. *Brain Exercises That Boost Memory*. Everday Health Website. http://www.everydayhealth.com/longevity/mental-fitness/brain-exercises-for-memory.aspx.

Mercola, Dr. 9 December 2012. How Innate 'Plasicity' of Your Brain Allows You to Improve Cognitive Performance and Prevent Age-Related Decline. Mercola.com: Health. http://articles.mercola.com/sites/articles/archive/2012/12/09/brain-placisity.aspx.

Moss, M.; Hewitt, S.; Moss, L.; Wenes, K. (2008). Modulation of Cognitive Performance and Mood by Aromas of Peppermint and Yland-Ylang. International Journal of Neuroscience, 118(1): 59-77.

National Institute on Aging Press Office. 20 February 1996. Landmark study links cognitive ability of youth with Alzheimer's disease risk later in life. US Department of Health and Human Services Online Newsroom. http://www.nia.nih.gov/espanol/newsroom/1996/02/landmark-study-links-cognitive-ability-youth-alzheimers-disease-risk-later-life.

Reif-Snyder, Heather. 30 August 2012. LLU research shows humor enhances short-term memory in elderly. Loma Linda University On Campus website. https://myllu.llu.edu/oncampus/story?id=4759.



COUNCIL ON AGING OF MARTIN COUNTY, INC.

900 SE Salerno Road | Stuart, FL 34997 | 772.223.7843 | www.kanecenter.org

The Integrative Memory Enhancement Program was developed by St. Johns County Council on Aging, Inc.

The program is being administered in Martin County by the Council on Aging of Martin County, Inc.

© 2016 St. Johns County Council on Aging, Inc.



Renter, Elizabeth. 16 June 2013. *Mint Scent Boosts Cognition, Improves Problem Solving and Memory*. Natrual Society. Retrieved from www. naturalsociety.com/mint-scent-improve-brain-cognition-memory.

Rossman, Jeffrey, PhD. 2013. Diaphragmatic Breathing and Health-Mind-Body-Mood Advisor: Why You Should Breathe Like a Baby. Rodale News. http://www.rodalenews.com/diaphragmatic-breathing-and-health.

Rush News Room. 18 April 2012. Daily Physical Activity May Reduce Alzheimer's Disease Risk at Any Age. Rush University Medical Center Online Press Release. http://www.rush.edu/webapps/MEDREL/servlet/NewsRelease?id=1583.

Study: Alzheimer's Disease a Much Larger Cause of Death Than Reported. 5 March 2014. American Academy of Neurology Online Press Release. www.aan.com/PressRoom/Home/PressRelease/1253.

Szalavitz, Maia. 02 May 2011. Friends With Benefits: Being Highly Social Cuts Dementia Risk by 70%. Time Online. http://healthland.time.com/2011/05/02/friends-with-benefits-being-highly-social-cuts-dementia-risk-by-70/.

Taylor, Jill Bolte, Dr. 2008. Quotation from your website homepage. http://drjilltaylor.com/.

Thomas, Karen, AHFMR. 8 January 2009. Research finds older women who are physically fit have better cognitive frunction. University of Calgary Cummings School of Medicine website. http://medicine.ucalgary.ca/about/poulin_aging.

Weil, Andrew, Dr. 2014. *Breathing an Introduction*. Weil-Website — Spirit and Inspiration. http://www.drweil.com/drw/u/ART00519/An-Introduction-to-Breathing.html.

*Bibliography was prepared by St. Johns County Council on Aging.



COUNCIL ON AGING OF MARTIN COUNTY, INC.

900 SE Salerno Road | Stuart, FL 34997 | 772.223.7843 | www.kanecenter.org