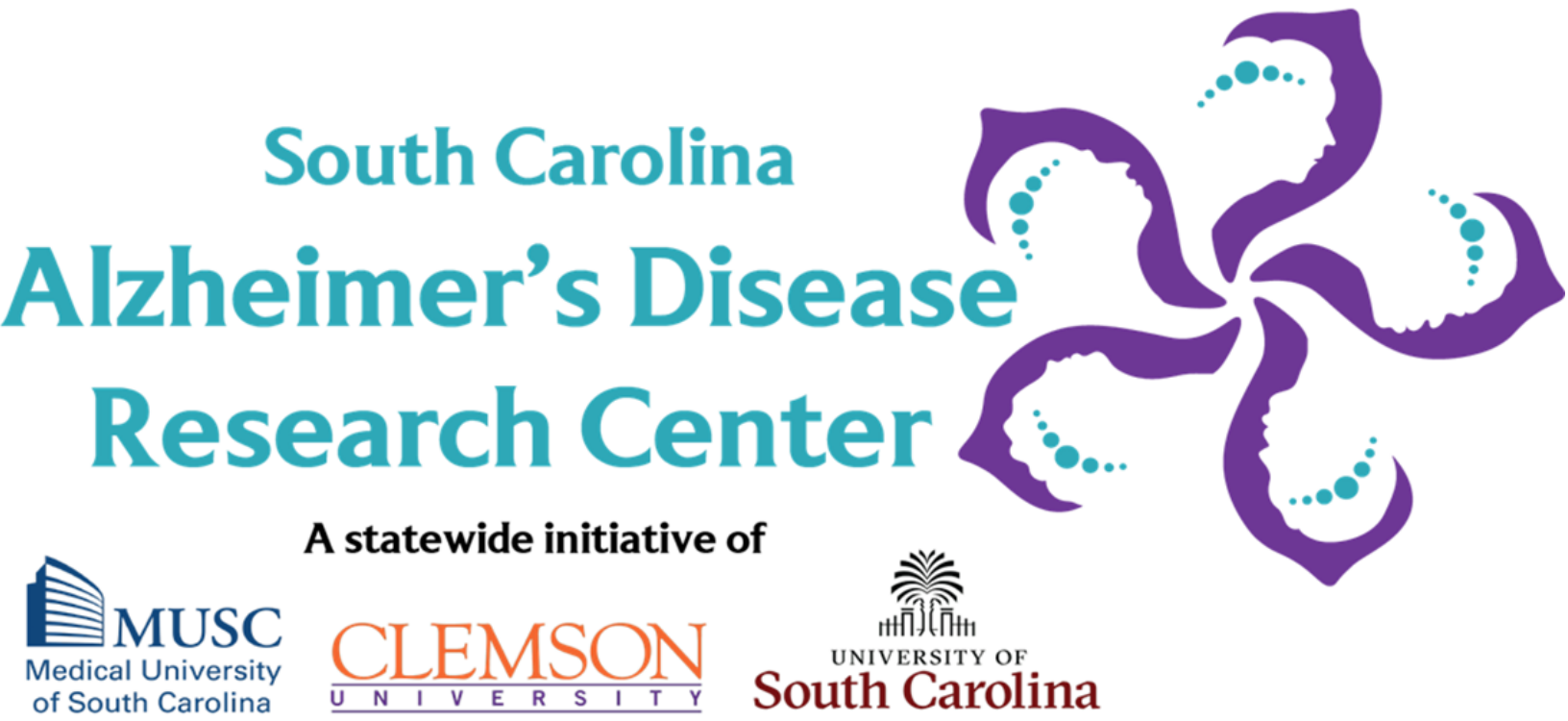


Changes in Neurodegenerative Biomarkers Following Computerized Cognitive Training: Findings from the ENACT Study



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- Analyses of neurodegenerative biomarkers from a randomized controlled trial show less Alzheimer-type amyloid pathology for men who completed bottom-up cognitive training
- Findings suggest neurodegenerative markers as potential outcome of cognitive training that may impact training transfer effects

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS															
• Computerized cognitive training is a cost-effective intervention that has shown reliable transfer effects for maintaining cognition • Neurodegenerative biomarkers (e.g., Amyloid-β40, 42, p-Tau 217), are promising hallmarks of ADRD • Impact of cognitive training on ADRD-related neurodegenerative biomarkers is limited • <i>This study examined baseline to post-test changes in neurodegenerative markers from a computerized cognitive training</i>	DATA (N = 53) • Baseline and post-test data from the Elucidating the Necessary Active Components of Training (ENACT; NCT05366023) • Community dwelling older adults aged 55 to 80 • Assigned to 20-hours of active control, bottom-up training (BUD), or top-down training (TTD) MEASURES • Blood levels of Aβ40 and Aβ42 quantified using the NEUROLOGY 4-PLEX (N4PE+) assay on Quanterix HD-X system	• Results showed a significant interaction between time, randomization group, and sex • Specifically, group differences in the Aβ42/Aβ40 ratio change from baseline to post-test varied by sex • While the Aβ42/Aβ40 ratio did not change for the active control group or the TTD group, the ratio increased (i.e., less Alzheimer-type amyloid pathology) over time for men who completed BUD training <table><caption>Aβ42/Aβ40 Ratio Data</caption><tr><th>Group</th><th>Baseline</th><th>Post-test</th></tr><tr><td>Active Control, Men</td><td>~0.061</td><td>~0.051</td></tr><tr><td>Active Control, Women</td><td>~0.048</td><td>~0.049</td></tr><tr><td>BUD, Men</td><td>~0.047</td><td>~0.053</td></tr><tr><td>BUD, Women</td><td>~0.048</td><td>~0.049</td></tr></table>	Group	Baseline	Post-test	Active Control, Men	~0.061	~0.051	Active Control, Women	~0.048	~0.049	BUD, Men	~0.047	~0.053	BUD, Women	~0.048	~0.049	• Changes in the Aβ42/Aβ40 ratio could be a potential biological outcome of cognitive training that may impact transfer effects • Highlights the need for research on biological mechanisms of cognitive training ACKNOWLEDGEMENTS This work was partially supported by the South Carolina Alzheimer's Disease Research Center and the SPARK Pilot Study Initiative ENACT is funded by the National Institute on Aging Please consider visiting additional posters P4-03 #9081  ALZHEIMER'S ASSOCIATION AAIC 26
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