

**NCKP 2025**  
**The Piano Conference**  
**Lombard, Illinois**  
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## **Older Adults Gain Cognitive Benefits from Piano Lessons**

Lois Svard, DMA, NCTM  
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This presentation concerns recent research that definitively proves that elderly individuals who take piano lessons for as short a time as a year show neuroplastic changes in certain key areas of the brain having to do with cognition, building cognitive reserve and delaying the aging process.

At some point in the next few weeks, I will begin posting on my blog site, [The Musician's Brain](#), a series of articles that discuss the cognitive advantages of studying a musical instrument for both children and adults, and how the cognitive reserve built through the study of music delays cognitive decline in the elderly. Those posts will go into greater detail than it is possible to do in the conference presentation.

In the meantime, for links to blog posts having to do with the cognitive advantages of studying music, click on [The Musician's Brain](#) in the menu, go to "Categories" in the R.H. column and click on "Benefits of studying music" and "Music Cognition" for links to blog posts that may be of interest.

Also:

### **Book**

Svard, Lois. "Does Music Really Make You Smarter?" In *The Musical Brain: What Students, Teachers, and Performers Need to Know*. Oxford University Press, 2023. (The 10<sup>th</sup> chapter in this book discusses in detail the cognitive advantages of studying music.)

### **A collection of articles from Science Daily that may be of interest:**

[Music may bring health benefits for older adults, poll suggests](#), February 7, 2024

[Playing an instrument linked to better brain health in older adults](#), January 29, 2024

[How music can prevent cognitive decline](#), April 17, 2023

[Just a few years of early musical training benefits the brain later in life](#), November 5, 2013

## Research articles

With the exception of the Román-Caballero article, all the articles below concern the Hannover-Geneva study discussed in the presentation. All are open access with the exception of the Mack article.

James, Clara E., Eckart Altenmüller, Matthias Kliegel, et al. “Train the Brain with Music (TBM): Brain Plasticity and Cognitive Benefits Induced by Musical Training in Elderly People in Germany and Switzerland, a Study Protocol for an RCT Comparing Musical Instrumental Practice to Sensitization to Music.” *BMC Geriatrics* 20, no. 418 (2020): <https://doi.org/10.1186/s12877-020-01761-y>.

Jünemann, Kristin, Anna Engels, Damien Marie, et al. “Increased Functional Connectivity in the Right Dorsal Auditory Stream After a Full Year of Piano Training in Healthy Older Adults.” *Scientific Reports* 13, no. 19993 (2023): <https://doi.org/10.1038/s41598-023-46513-1>.

Mack, Melanie, Damien Marie, Florian Worschech, et al. “Effects of a 1-Year Piano Intervention on Cognitive Flexibility in Older Adults.” *Psychology and Aging* 40, no. 2 (2024): <https://dx.doi.org/10.1037/pag0000871>

Marie, Damien, Cécile A. H. Müller, Eckart Altenmüller, et al. “Music Interventions in 132 Healthy Older Adults Enhance Cerebellar Grey Matter and Auditory Working Memory, Despite General Brain Atrophy.” *Neuroimage: Reports* 3, no. 2 (2023): <https://doi.org/10.1016/j.ynirp.2023.100166>.

Román-Caballero, R, Arnedo, M, Triviño, M., Lupiáñez, J. (2018). “Musical practice as an enhancer of cognitive function in healthy aging – A systematic review and meta-analysis.” *PLoS ONE* 13(11): e207957. <https://doi.org/10.1371/journal.pone.0207957>

Worschech, Florian, Damien Marie, Kristin Jünemann, et al. “Improved Speech in Noise Perception in the Elderly After 6 Months of Musical Instruction.” *Frontiers in Neuroscience* 15 (2021): <https://doi.org/10.3389/fnins.2021.696240>.

Worschech, Florian, Damien Marie, Christopher Sinke, et al. “Quality of Life in Older Adults is Enhanced by Piano Practice: Results from a Randomized Controlled Trial.” *Annals of the New York Academy of Sciences* (2025): 1-16. <https://doi.org/10.1111/nyas.15397>.