

## Do musicians have better short-term memory than nonmusicians? A multi-lab study

*Tuesday, September 24, 2024 11:00 AM (10 minutes)*

Musicians are often regarded as models of brain plasticity and associated cognitive benefits. This emerges when expert musicians are compared with nonmusicians. A frequently observed finding is a short-term memory advantage of the former over the latter. Although meta-analyses report that the effect size of this advantage is medium, no study was adequately powered to estimate reliably an effect of such size. This multi-lab study has been ideated, realised, and conducted by several researchers working on this topic. Our ultimate goal was to provide a community-driven shared and reliable estimate of the musicians' memory advantage (if any) and set a method and a standard for future studies in neuroscience and psychology comparing expert musicians and nonmusicians. Thirty-four research units are participating in the project. Participants will complete musical, verbal, and visuospatial spans to assess short-term memory; n-back task for executive functions, raven matrices and WAIS-IV vocabulary for intelligence, and other tasks to assess individual differences in musicality, personality, and socio-economic status. We expect to collect over 700 expert musicians and 700 paired nonmusicians in a laboratory experiment. We expect to replicate the results of the meta-analysis on short-term memory of musicians and nonmusicians, namely, a large musicians' advantage in musical short-term memory, and a medium advantage in verbal and visuospatial short-term memory. This project aims to set the basis for sound research practices in studies comparing musicians and nonmusicians, and contribute to the ongoing debate on the possible cognitive benefits of musical training. Results will be available at the conference.

**If you're submitting a poster, would you be interested in giving a blitz talk?**

**If you're submitting a symposium talk, what's the symposium title?**

**If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?**

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