

MUSIC LEARNING HELPS COGNITIVE CONTROL

PROCESSING SPEEDS



Music learning increases **cognitive processing speeds**¹

IMPULSE CONTROL



Music learning improves **inhibitory (impulse) control**²

HYPERACTIVITY



Music learning enhances **control of hyperactivity**^{2,3}

CREATIVITY



Music learning enhances neural networks that are engaged in **creativity**⁴

DIVERGENT THINKING



Music learning enhances **divergent thinking**⁵

TASK SWITCHING



Music learning enhances the ability to **switch tasks** efficiently⁶

CONTROL



Music learning improves **cognitive control**⁷

FLEXIBILITY



Music learning improves **cognitive flexibility**⁶

REFERENCES

1. Roden, I., Könen, T., Bongard, S., Frankenberger, E., Friedrich, E. K., & Kreutz, G. (2014). Effects of music training on attention, processing speed and cognitive music abilities. *Applied Cognitive Psychology*.
2. Fasano, M. C., Semeraro, C., Cassibba, R., Kringelbach, M. L., Monacis, L., de Palo, V., ... & Brattico, E. (2019). Short-term orchestral music training modulates hyperactivity and inhibitory control in school-age children. *Frontiers in Psychology*.
3. Hennessy, S. L., Sachs, M. E., Ilari, B. S., & Habibi, A. (2019). Effects of music training on inhibitory control and associated neural networks in school-aged children. *Frontiers in Neuroscience*.
4. Limb, C. J., & Braun, A. R. (2008). Neural substrates of spontaneous musical performance: An fMRI study of jazz improvisation. *PLOS ONE*.
5. Gibson, C., Folley, B. S., & Park, S. (2009). Enhanced divergent thinking and creativity in musicians: A behavioral and near-infrared spectroscopy study. *Brain and Cognition*.
6. Zuk, J., Benjamin, C., Kenyon, A., & Gaab, N. (2014). Behavioral and neural correlates of executive functioning in musicians and non-musicians. *PLOS ONE*.
7. Slevc, L. R., & Okada, B. M. (2015). Processing structure in language and music: A case for shared reliance on cognitive control. *Psychonomic Bulletin & Review*.