

Musicians react faster than non-musicians

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This research was conducted by **Simon P. Landry** and **François Champoux** at the **Université de Montréal, Canada**.

Summary

This study aimed to investigate whether long-term musical training improves unisensory (audio or tactile) and multisensory (audio and tactile) processing capacities. It found that musical training improves ability for both single and multiple sensory systems.

On average, musicians reacted faster than non-musicians

16 musicians and 19 non-musicians, aged 18-34 from Montreal, were invited to take part in 576 'sets' of a behavioural reaction task during which they were asked to click a computer mouse immediately upon the perception of stimulation delivered through a white-noise burst and/or vibration on the left hand. On average, musicians reacted faster than non-musicians to these stimulations and, in both groups, participants reacted faster to the combination of both stimulations rather than them individually. However, musicians were more likely to react to multisensory stimulation within 100 and 130 milliseconds and non-musicians responded more slowly to unisensory stimulation.

Musicians benefit greater from audio-tactile stimulation during earlier reaction timeframes

Long-term musical training appears to reduce tactile reaction times yet produce faster responses to auditory stimulation. Musical training can affect neuro-structure. However, it has been difficult to identify with certainty which regions of the brain support these improvements in perception and behaviour. Further research should consider participants' handedness and other features that

might affect skill development and task performance such as hereditary factors in musical expertise, instrument-specific improvements and general intelligence.

This summary is by **Anna Kolliakou, King's Knowledge Exchange Associate**

Keywords

music **reaction** **Canada** **experiment**

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