

# Playing a musical instrument can help rehabilitate stroke survivors

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Micrograph showing cortical pseudolaminar necrosis, a finding seen in strokes on medical imaging and at autopsy. H&E-LFB stain. Credit: Nephron/Wikipedia

(Medical Xpress)—Researchers at Goldsmiths, University of London have found that playing a musical instrument could help the rehabilitation of stroke survivors.

The study saw [stroke survivors](#) improve their spatial awareness after four

sessions and daily homework playing scales and melodies on chime bars with a music therapist.

A 'music intervention' program was implemented with people recovering from 'neglect', which is when damage to one side of the brain (usually the right) is sustained following a stroke causing [spatial awareness](#) problems on the opposite side of the patient's body.

This can lead to patients having difficulty with everyday tasks such as eating food on one side of their plate, as well as causing them to bump into things as they move around and not notice people on one side.

The patients took part in four sessions, led by music therapist and researcher Rebeka Bodak, and as they improved the researchers increased the distance between the chime bars to encourage them to draw their attention further to the left.

Dr Lauren Stewart, from the Music, Mind and Brain team based in Goldsmiths' Department of Psychology, said: "Despite a good deal of research into rehabilitation approaches, treatment options are limited. Our research shows that playing a [musical instrument](#) could be an effective intervention for neglect patients. It would be great to invite more patients to participate in future studies, as well as see if the music intervention has the capacity to translate to improvements in [everyday tasks](#)."

## The research

- The team tested two patients on a series of neglect tests three times over six weeks before an intervention period to establish a preliminary baseline.
- The patients participated in four music intervention sessions one week apart, plus structured homework, which they completed

twice a day.

- As the patients improved, the team increased the distance between the chime bars to encourage the patients to play further into their left side of space.
- The team measured the patients' ability to attend to their left side both before and after each session with the chime bars.
- Significant improvements in performance were captured on two 'cancellation' tasks (clinical tests of neglect), demonstrating short-term treatment effects.
- The team also tested the [patients](#) one week after the end of the intervention period, and again saw significant improvement in performance on the same two tasks, demonstrating longer-lasting effects.

The team is now planning to expand the study into a formal clinical trial, with a larger sample, to determine the full impact of the intervention.

**More information:** "Reducing chronic visuo-spatial neglect following right hemisphere stroke through instrument playing." Rebeka Bodak, et al. *Front. Hum. Neurosci.*, 11 June 2014 | [DOI: 10.3389/fnhum.2014.00413](#)

Provided by Goldsmiths, University of London

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