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Lifelong musical experience can offset the effects that ageing has on the brain

This research was conducted by **Alexandra Parbery-Clark, Samira Anderson, Emily Hittner, and Nina Kraus** at **Northwestern University, USA**

Summary

As people age their brains become slower in processing sound. Musical training is known to strengthen the ability of people's brains to process sound and so the paper reports the results of an experiment designed to test whether the brain functioning of older people can be sustained or improved with musical training.

The research was based on a sample of 80 people: musicians and non-musicians

The research compared a 'younger' group of 50 people aged between 18 and 35 and with an 'older' group 30 people aged between 46 and 65. Both groups included a mixture of musicians and non-musicians. All 80 participants had normal hearing, were native English speakers and had normal IQ levels.

They measured the way in which people's brains responded to sound

By using a consistent set of sounds and monitoring the participants' brain activity the researchers were able to measure how long the brain took to process those sounds. They found that ageing slowed the response times of all participants, but that musicians showed fewer age-related delays than non-musicians. This was particularly the case with consonant sounds (as vowel perception tends not to deteriorate with age).

The research revealed 'the biologically powerful impact of music on the ageing nervous system'

But the authors don't know exactly how this impact occurs. They speculate that the frequent practice of playing or listening to music keeps certain parts of the brain active and that music experience is akin to a form of auditory training for the brain. In auditory training the brain is challenged to distinguish between different sounds and process them.

Keywords

music **experiment** **hearing** **USA** **brain** **elderly**

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