

Picking up mistakes

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(Medical Xpress)—Musicians have sharper minds are able to pick up mistakes and fix them quicker than the rest of us, according to new research.

The study, by researchers at the University of St Andrews, suggests that musical activity could protect against decline in mental abilities through age or illness.

The work, published in the journal *Neuropsychologia*, extends previous findings that mental abilities are positively related to musical skills. The researchers say that the latest findings demonstrate the potential for 'far reaching benefits' of musical activity on mental and physical well-being.

The study was led by St Andrews psychologist Dr Ines Jentsch, who compared the cognitive ability of amateur [musicians](#) versus non-musicians in performing simple mental tasks.

The most striking difference she found lay in the musicians' ability to recognise and correct mistakes. Not only that, but they responded faster than those with little or no musical training, with no loss in accuracy. This is perhaps not surprising since musicians learn to be constantly aware of their performance, but to not be overly affected by mistakes.

Dr Jentsch, a Reader in the University's School of Psychology and Neuroscience, commented, "Our study shows that even moderate levels of musical activity can benefit [brain](#) functioning.

"Our findings could have important implications as the processes involved are amongst the first to be affected by aging, as well as a number of mental illnesses such as depression. The research suggests that musical activity could be used as an effective intervention to slow, stop or even reverse age- or illness-related decline in mental functioning."

The study compared groups of amateur musicians with varying levels of time they had spent in practicing their instrument to a non-musician control group. They then measured each group's behavioural and brain responses to simple mental tests.

The results showed that playing a musical instrument, even at moderate levels, improves the ability to monitor our behavior for errors and adjust

subsequent responses more effectively when needed.

Dr Jentsch, herself a keen pianist, continued, "Musical activity cannot only immensely enrich our lives but the associated benefits for our physical and mental functioning could be even more far-reaching than proposed in our and previous research.

"Music plays an important role in virtually all societies. Nevertheless, in times of economic hardship, funds for music education are often amongst the first to be cut.

"We strongly encourage political decision makers to reconsider funding cuts for arts education and to increase public spending for music tuition.

"In addition, adults who have never played an instrument or felt too old to learn should be encouraged to take up music - it's never too late."

More information: The study is published online at www.sciencedirect.com/science/.../S0028393213003217

Provided by University of St Andrews

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