

# Music reduces stress during medical procedures

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This research was conducted by **N. Schneider, M. Schedlowski, T. H. Schürmeyer and H. Becke** at **Hannover Medical School, Germany**

## Summary

Hospital tests and treatments can be extremely stressful for patients, which can lead to pain, medical complications and unreliable test results. Tests used to diagnose serious medical conditions often involve complex, intimidating technology, which may add to stress levels. Music has been used in a number of settings to help with stress reduction. In this study researchers from Hannover Medical School in Germany showed music to be beneficial in reducing patients' stress levels when undergoing cerebral angiography, where images are taken of blood vessels within the brain.

## Music reduces blood pressure and prevents rises in stress hormones

This study observed 30 patients undergoing brain imaging for a variety of disorders (including brain tumours and bleeding within the brain). Half of them listened to music of their choice during the procedure. The other half did not listen to any music. Researchers examined personality traits related to anxiety at the outset and then measured fear ratings, blood pressure and stress hormones in the blood during the angiography itself. The music group showed lower blood pressure during the angiography, despite similar ratings for fear compared to the non-music group. A gradual increase in stress hormone level was seen in the control group but not in those who listened to music.

# Music helps people relax and distracts them

The researchers conclude that music appears to help mitigate the stress response that naturally occurs in a highly medical, frightening situation. This is in agreement with previous research undertaken in other medical and surgical settings, including intensive care. The benefits were greatest in the subjects who reported higher anxiety at the start of the study. Patients reported that they felt the music helped them relax and focus less on their circumstances, though the researchers note that the full mechanisms underlying the effects of music on the human body remain to be determined.

This summary is by **Vicky MacBean, King's Knowledge Exchange Associate**

## Keywords

**music** **experiment** **anxiety** **Germany** **stress**

Title	Stress reduction through music in patients undergoing cerebral angiography
Author(s)	Schneider, N., Schedlowski, M., Schürmeyer, T. H. and Becke, H.
Publication date	2001
Source	Neuroradiology, Vol 43, Iss 6, pp 472-476
Link	<a href="http://link.springer.com/article/10.1007/s002340000522">http://link.springer.com/article/10.1007/s002340000522</a>
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By **Culture.Case** | 28 January 2016 | **Health and wellbeing impacts of arts and culture** |



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