

# Virus takes memories from cellist but leaves music

November 15 2011, by Deborah Braconnier

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(Medical Xpress) -- At a recent meeting at the Society for Neuroscience in Washington DC, researchers revealed a case of herpesviral encephalitis that had destroyed areas of a 71-year-old cellist's brain. The man, known only as PM, had lost most of his memories prior to 2005 however he seems to be able to remember music, showing the researchers that music memory may be stored independently.

Herpesviral [encephalitis](#) is caused by the same virus that causes cold sores. It is a rare infection and occurs when this virus travels along nerves to the brain. In the case of PM, the virus wiped out large sections of his medial temporal lobes which have been linked to memories of events and facts. PM was left with no memory of personal or professional events he had done and the only people he recognized were his brother and a care worker.

Doctors began testing PM's abilities after they discovered that he was able to identify musical scales and recall music that was played for him.

Neurologist Carsten Finke from Charite University Hospital in Berlin decided to take these tests further. Working with a team of professional musicians, Finke designed a series of tests that were designed to look at just how PM's musical [memory](#) worked.

One test, PM was presented with a piece of music that was composed before he was struck with illness. He was then played a similar piece composed after his illness. When he was asked which piece he knew

better, 93 percent of the time he chose the older piece.

In addition to amnesia, PM has had difficulty learning new things. For example, he is unable to remember the layout of his home or which medications he is supposed to take on a daily basis. However, in another test the doctors conducted, PM was able to identify pieces of music that were played to him earlier in the day 77 percent of the time.

Doctors are hoping this case will help to better understand how memories are stored in the brain. In the case of PM, they are also hoping to use [music](#) to help in his rehabilitation. They plan to try using musical notes and connect them to different people and tasks.

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