

Music therapy rewires the brains of people unable to speak

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(PhysOrg.com) -- Scientists are for the first time studying a speech therapy technique called Melodic Intonation Therapy to find out what happens in patients' brains. The therapy is used to teach people who have aphasia (inability to speak) after suffering a stroke to speak, and makes use of the fact that many people who cannot talk can still sing.

When patients suffer a [stroke](#) on the left hemisphere of the brain it affects their ability to speak, but melodic intonation therapy attempts to tap into the right side of the brain if it is undamaged. Music affects many parts of the brain in both hemispheres, and it influences motor skills, emotions and hearing. If the affected person is taught to sing

sentences, they can then learn to speak them.

Harvard University neurologist Professor Gottfried Schlaug is leading [clinical trials](#) to try to find out why the technique works for many people even when other forms of speech therapy have failed. In the study he took images of the brains of patients before the therapy and again afterwards, and discovered there are structural and functional changes in the right side of the brain, with the patients essentially “rewiring” their brains as they learn to use the singing center in the right [brain](#) instead of the speech center in the left.

Many patients who have not been able to speak, in some cases for many years, and who have tried other speech therapies with no success, have learned to speak after a few dozen sessions of melodic intonation therapy. Even after a single session most stroke victims can learn to say a simple phrase by combining a note in the melody with each syllable, and even one phrase can make them less dependent and frustrated.

Schlaug spoke about the technique at the American Association for the Advancement of Science’s annual meeting in San Diego earlier this week. He said he thought the reason the therapy is not used more widely is at least in part because many people are embarrassed when asked to sing, and some therapists may feel uncomfortable singing to their patients. Some patients, especially males, can also struggle with embarrassment. Once they start, Schlaug said, they settle in and the therapy is simple. His next goal is to teach the technique to care givers.

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