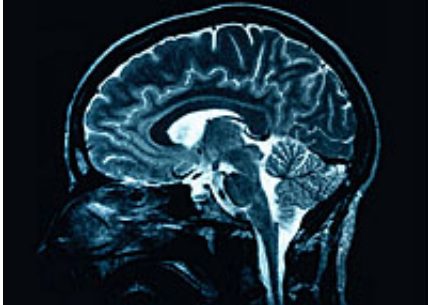


# Dealing with depression

June 11 2012

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(Medical Xpress) -- A technique which helps people control activity in a specific part of their brain could be used to help ease depression, University research has found.

Published in the journal, [PLoS ONE](#), Professor David Linden, School of Psychology, from Cardiff University's [Brain](#) Research Imaging Centre (CUBRIC) and his team found that a technique known as Neurofeedback helped ease depression symptoms.

Neurofeedback involves [patients](#) going into an MRI scanner where their brain activity is continuously measured with functional magnetic resonance imaging (fMRI) and fed back to them.

The same research group has already applied this technique to Parkinson's disease.

In the present study, eight patients with depression were shown positive, negative and neutral pictures to help identify areas in their brain that were engaged in the processing of positive emotions.

The patients were then asked to increase the activity in this area by engaging in positive emotional imagery. During this task patients received feedback via a thermometer display on how well they were doing so they could test the effectiveness of different mental strategies.

"This was the first time this Neurofeedback procedure has been used in depression," according to Professor Linden, who led the research.

Using this technique, the researchers found that all patients were able to control the activity in the targeted emotion networks. Their depression improved significantly after the interventions. Their medication dose was not changed during the study.

Another eight patients that had been assigned to the control group performed exactly the same positive emotion imagery task outside the scanner, but this group did not show any clinical improvements.

Professor Linden added: "The findings of the initial pilot study are preliminary and further research is required to assess the possible clinical benefits to patients. We do not expect this to become a stand-alone treatment tool, but rather a potential part of comprehensive treatment packages."

The team has already started a larger randomised controlled trial, funded by the Medical Research Council (MRC), to evaluate the potential therapeutic effects on [depression](#).

"One of the interesting aspects of this technique is that it gives patients the experience of controlling aspects of their own brain activity. Many

of them were very interested in this new way of engaging with their brain," Professor Linden added.

**More information:** [dx.plos.org/10.1371/journal.pone.0038115](https://doi.org/10.1371/journal.pone.0038115)

Provided by Cardiff University

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