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Brain scans reveal placebo effect in depressed patients

13:00 02 January 02
Emma Young

Depressed patients who respond to anti-depressant drugs show a decrease in activity in a key brain region - but patients who respond to placebos show the opposite, say US researchers. The discovery could reveal alternative ways of treating depression, they say.

Many depressed patients report improvements in mood when given inert pills that they believe to be medication. "People have known for years that if you give placebos to patients with depression, many of them will get better," says Andrew Leuchter of the University of California, Los Angeles, who led the new research.

"What this study shows, for the first time, is that people who get better on placebo have a change in brain function, just as surely as people who get better on medication," he says. "We now know that placebo is, very definitely, an active treatment condition."

Leuchter's team used a brain imaging technique called quantitative electroencephalography (QEEG) to examine brain electrical activity in 51 patients with major depression. The patients were given either a placebo or one of two commonly prescribed antidepressants over a nine-week period.

Overall, 52 per cent of the people given active drugs and 38 per cent of the patients given a placebo reported improvements in mood.

Delayed reaction

In the patients who responded to the drugs, the QEEG scans showed a significant reduction in activity in the prefrontal cortex - an area linked to memory, information processing and attention. But the scans revealed an increase in activity in the same area in patients who responded to the placebo.

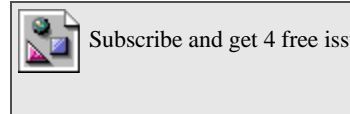
The team also found that changes in brain activity appeared almost immediately in patients given anti-depressants. The changes in the placebo group took about two weeks to appear.

"These findings show us that there are different pathways to improvement for people suffering from depression," says Leuchter. "If we can identify some of the mechanisms that help people get better with placebo, we may be able to make treatments more effective."

Journal reference: *American Journal of Psychiatry* (vol 159, p 122)

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