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Sham therapy works in Parkinson's

Italian scientists have shown dummy treatment can have a positive effect on the brain activity of patients with Parkinson's disease.

In their study, this placebo therapy caused the part of the brain that is overactive in the disease to return to a more normal level of activity.

These changes were closely related to improvement of symptoms.

Professor Fabrizio Benedetti and his team at Turin University report their findings in *Nature Neuroscience*.

The placebo effect is a complex phenomenon whereby a sham treatment can trigger a therapeutic effect if the subject believes that it is effective.

The study

Professor Benedetti and colleagues gave 11 patients with Parkinson's disease injections of drugs that temporarily relieved symptoms such as muscle stiffness and tremors.

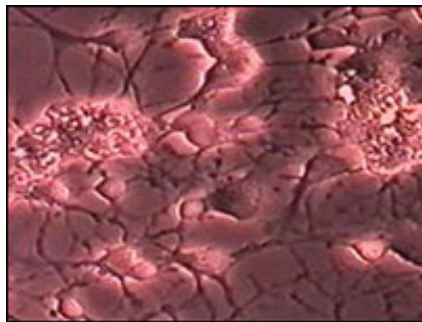
They then gave the same patients a placebo injection containing a harmless salt solution and no medication, but did not tell the patients that they had made the switch.

Six of the patients responded to the placebo and had a decrease in arm rigidity.

Compared to the patients who did not respond, these patients also showed a significant reduction in nerve cell activity in a part of the brain called the subthalamic nucleus (STN).

The STN is involved in controlling movement and is overactive in Parkinson's disease.

Placebo effect



Changes in brain activity were noted with placebo

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The patients who did not respond to the placebo had no change in STN activity.

To check that their findings were not caused by anything other than the placebo, the researchers studied a further 12 Parkinson's patients who received no treatment.

Again, these patients showed no change in STN activity, suggesting that the change seen in some of the placebo patients was caused by the dummy 'treatment'.

“ Although this increases our understanding it will not in itself lead to improved treatments ”

Parkinson's Disease Society spokesman

The researchers said their findings supported the idea that relief of Parkinson's disease symptoms is linked to a decrease in activity in this area of the brain.

Previous studies have shown dummy treatments can increase production of the brain chemical dopamine.

Parkinson's patients do not produce enough dopamine, which affects co-ordination.

Current therapy consists mainly of dopamine replacement using levodopa and other dopamine-enhancing agents.

No treatment change

The Parkinson's Disease Society said the findings were interesting but doubted whether they would alter current management.

"At the scientific level, it is interesting that the study has shown a physiological effect in the STN from placebo administration.

"Although this increases our understanding it will not in itself lead to improved treatments, but of course, we welcome further research that will build on the findings."

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