Researchers characterize neurologic response associated with placebo effect

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Parkinson's disease is the second most common neurological disorder, affecting almost 10 million people worldwide. While there is no cure for this disease, many patients are able to successfully manage their symptoms. Surgical interventions appear to provide relief for some patients.

Unfortunately, these procedures have been difficult to fully evaluate because many patients have a strong placebo response to sham surgery in clinical trials. A new study in the *Journal of Clinical Investigation* identifies a neurological network that may predict patients that are likely to have a favorable response to sham surgery. David Eidelberg and colleagues at the Feinstein Institute for Medical Research evaluated Parkinson's disease patients enrolled in a double blind gene therapy trial. Brain networks were evaluated prior to the sham surgery and after recovery. Patients that responded favorably to sham surgery expressed a distinct neurological profile. After it was revealed to these patients that they were part of the placebo group, their perceived improvements declined and their neurological network more closely resembled the pre-surgery profile.

In their accompanying commentary, Mariya Cherkasova and A. Jon Stoessl at University of British Columbia note that the ability to identify sham responders may limit placebo effects in clinical trials and help better identify efficacious treatments.

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