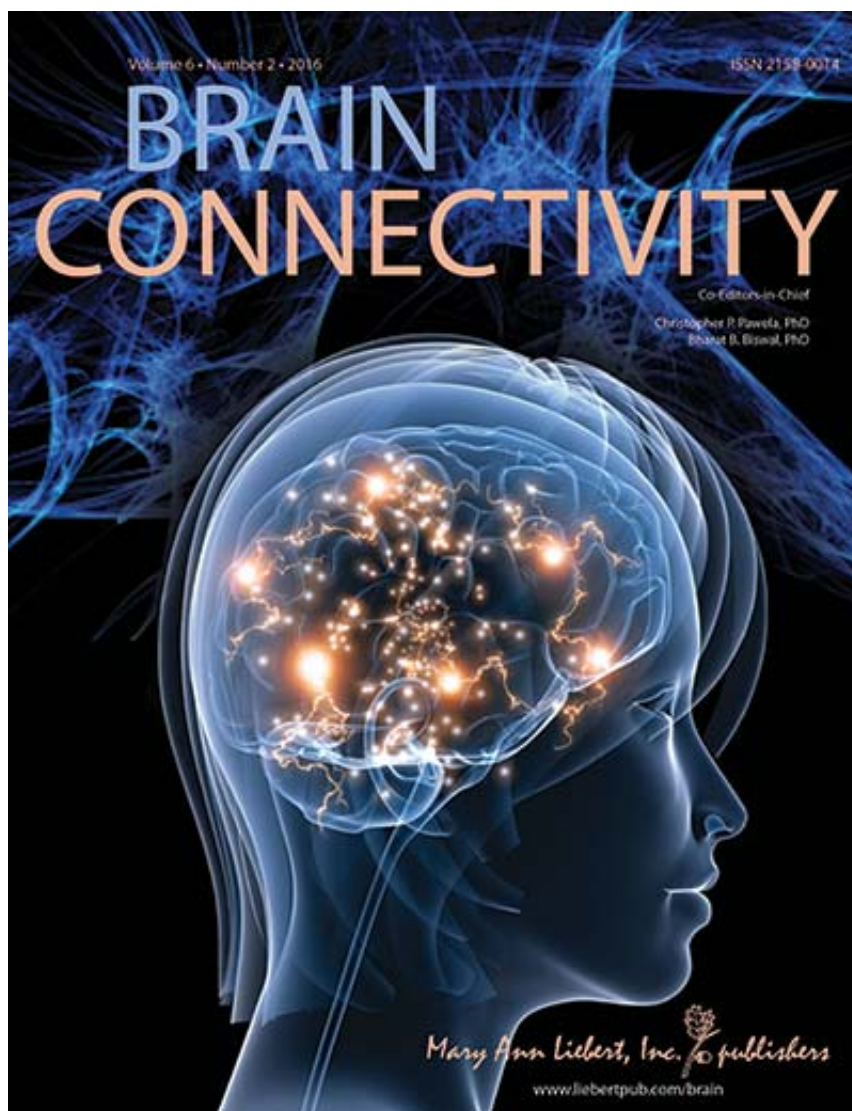


Altered brain communication could be predictive marker of dementia in Parkinson's disease

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Dementia will develop in about 80% of patients with Parkinson's disease, and a new study has found significant variability in brain signaling that could serve as a predictive marker for identifying which patients are at highest risk of dementia. Measuring brain signal variability as an early indicator of impaired cognitive function and information processing is an innovative new approach described in the study published in *Brain Connectivity*.

In "*Brain Connectivity Alterations Are Associated with Dementia in Parkinson's Disease*," J.A. Bertrand and coauthors from Baycrest Center (Toronto), Hôpital du Sacré-Cur de Montréal, McGill University (Montreal), Université de Montréal, Centre Hospitalier de l'Université de Montréal, and Université du Québec à Montréal, Canada, describe the use of resting state electroencephalography (EEG) for a mean of 3 years in patients with Parkinson's disease, comparing the findings in those in whom dementia did or did not develop. The researchers measured specific disruptions in brain communication that were present before symptoms of dementia were apparent. If confirmed by additional studies, these brain signaling alterations could identify the best patients to include in trials of new neuroprotective drugs.

"Early diagnosis is key to treatment of dementia [patients](#) with the limited options currently available," says Christopher Pawela, PhD, Co-Editor-in-Chief of *Brain Connectivity* and Assistant Professor, Medical College of Wisconsin. "EEG is a lower-cost alternative to many modern diagnostic imaging modalities. If a reliable predictive marker for [dementia](#) could be developed using EEG, it may find lower barriers to clinical use."

More information: Josie-Anne Bertrand et al. Brain connectivity alterations are associated with dementia in Parkinson's disease, *Brain Connectivity* (2015). [DOI: 10.1089/brain.2015.0390](https://doi.org/10.1089/brain.2015.0390)

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