



PARKINSON'S DISEASE NEWS

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BREATH TEST FOR EARLY PARKINSON'S DISEASE

Researchers have tested a sensor to detect early Parkinson's Disease solely by using the breath of the patients. A device was previously developed that had 40 sensors based on gold nanoparticles. Each sensor had a different chemical attached to it that could bind certain volatile molecules in the breath. The device detected differences in the exhaled breath of people already being treated for Parkinson's Disease. So it was assessed whether the device could detect differences in the breath of people with early or untreated Parkinson's Disease.

The sensitivity, specificity, and accuracy values of the sensor array to detect Parkinson's Disease when compared to people who did not have Parkinson's Disease controls were 79% (sensitivity), 84% (specificity), and 81% (accuracy).



The results were less than when using the more expensive Midbrain ultrasonography, which gave results of 93% (sensitivity), 90% (specificity), and 92% (accuracy). However, the results were considerably better than when using smell detection tests which gave far lesser results : 62% (sensitivity), 89% (specificity), and 73% (accuracy).

So although the device needs to be improved and validated by larger studies, the researchers say that it has potential as a small, portable system to screen at-risk individuals without the need for highly trained specialists.

Reference : ACS Chemical Neuroscience [2018] Jul 13 [Epub ahead of print] (J.P.M.Finberg, M.Schwartz, R.Jeries, S.Badarny, M.K.Nakhleh, E.Abu Daoud, Y.Ayubkhanov, M.Aboud-Hawa, Y.Y.Broza, H.Haick)

Complete abstract : <http://www.ncbi.nlm.nih.gov/pubmed/29989795>

<http://www.viartis.net/parkinsons.disease/news/180731.pdf>

mail@viartis.net

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