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Spit found to hold a clue for future brain health

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Researcher in U.S. use metabolomics, a new technique to diagnose Alzheimer's disease in the earliest stages.

Researchers say that a simple saliva test has shown promise in identifying early signs of Alzheimer’s disease. The new technique probes molecules found inside people’s spit. Experts hope that this could aid in early detection of the disease.

The research was carried by the researcher doctor Stewart Graham, of the Beaumont Research Institute in the U.S. “We used metabolomics, a newer technique to study molecules involved in metabolism”, reported Mirror, UK. “Our goal was to find unique patterns of molecules in the saliva of our study participants that could be used to diagnose Alzheimer’s disease in the earliest stages, when treatment is considered most effective. Presently, therapies for Alzheimer’s are initiated only after a patient is diagnosed and treatments offer modest benefits.”

The pattern or fingerprint of metabolites in the biological sample can be used to learn about the health of the organism. The study participants included 29 adults in three groups: mild cognitive impairment, Alzheimer’s disease and a control group. After specimens were collected, the researchers positively identified and accurately quantified 57 metabolites. The researchers found some of the observed variances in the biomarkers were “significant.” From their data, they were able to make predictions as to those at most risk of developing Alzheimer’s.

Around 800,000 people in the UK currently have dementia, according to the Alzheimer’s Society. One in three people over 65 is expected to develop the condition. The numbers are increasing because people are living longer. Alzheimer’s currently has no cure, few reliable diagnostic tests, and is predicted to reach epidemic proportions worldwide by 2050. Thus, scientists are scrambling to develop methods that can quickly and accurately diagnose the neurodegenerative disorder.

The researchers are now seeking additional funding to conduct a larger, three-year study with more participants to validate the pilot study which was published in the Journal of Alzheimer’s Disease.

The results of this new study were published recently in the Journal of Alzheimer's disease in an article entitled "Diagnostic Biomarkers of Alzheimer's Disease as Identified in Saliva using 1H NMR-Based Metabolomics."