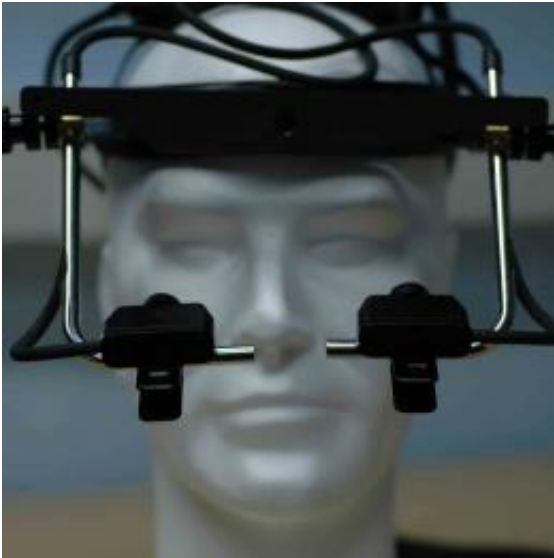


Are the eyes the key to a new test for Alzheimer's disease?

August 23 2012



(Medical Xpress)—A simple eye tracking test could hold the key to earlier Alzheimer's diagnosis, according to new research published in the *Journal of the American Aging Association*.

Work, led by Lancaster University in partnership with Royal Preston Hospital, Lancashire [Teaching Hospitals](#) NHS Foundation Trust, has shown that people with Alzheimer's disease have difficulty with one particular type of eye tracking test.

As part of the study, 18 patients with Alzheimer's disease, 25 patients with Parkinson's disease, 17 healthy young people and 18 healthy older people were asked to follow the movements of light on a [computer monitor](#), but in some instances they were asked to look the opposite way, away from the light.

Detailed eye-tracking [measurements](#), taken from the group showed stark contrasts in results.

Patients with Alzheimer's made errors on the task where they were asked to look away from the light and were unable correct those errors, despite the fact that they were able to respond perfectly normally when they were asked to look towards the light.

These uncorrected errors were 10 times more frequent in the Alzheimer's patients compared to the control groups.

Researchers also measured memory function among those Alzheimer's patients who found the test difficult and were able to show a clear correlation with lower [memory function](#).

Dr Trevor Crawford of the department of Psychology and the Centre for Aging Research, Lancaster University, said these new results were potentially very exciting as they demonstrated, for the first time, a connection with the [memory impairment](#) that is so often the first noticeable symptom in Alzheimer's disease.

He said: "The diagnosis of Alzheimer's disease is currently heavily dependent on the results of a series of lengthy [neuropsychological tests](#). However, patients with a [dementia](#) often find that these tests are difficult to complete due to a lack of clear understanding and lapse in their attention or motivation.

"Over the last ten years researchers in laboratories around the world have been working on an alternative approach based on the brain's control of the movements of the eye as a tool for investigating cognitive abilities such as attention, cognitive inhibition and memory.

"This study takes this work forward because we found strong evidence that the difficulty in noticing and correcting the errors was probably caused by a problem in the memory networks of the brain that allow us to store the spatial position of objects in the environment.

"The light tracking test could play a vital role in [diagnosis](#) as it allows us to identify, and exclude number alternative explanations of the test results."

More information: The Role of Working Memory and Attentional Disengagement on Inhibitory control: Effects of Aging and Alzheimer's Disease, *Journal of the American Aging Association* Trevor J. Crawford et al. www.springerlink.com/content/au722u75w5525kv1/

Provided by Lancaster University

Citation: Are the eyes the key to a new test for Alzheimer's disease? (2012, August 23) retrieved 26 April 2024 from <https://medicalxpress.com/news/2012-08-eyes-key-alzheimer-disease.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.