

Being unaware of memory loss predicts Alzheimer's disease, new study shows

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PET scan of a human brain with Alzheimer's disease. Credit: public domain

While memory loss is an early symptom of Alzheimer's disease, its presence doesn't mean a person will develop dementia. A new study at the Centre for Addiction and Mental Health (CAMH) has found a

clinically useful way to predict who won't develop Alzheimer's disease, based on patients' awareness of their memory problems.

People who were unaware of their memory loss, a condition called anosognosia, were more likely to progress to Alzheimer's disease, according to the study, published today in the *Journal of Clinical Psychiatry*. Those who were aware of memory problems were unlikely to develop dementia.

"If patients complain of memory problems, but their partner or caregiver isn't overly concerned, it's likely that the memory loss is due to other factors, possibly depression or anxiety," says lead author Dr. Philip Gerretsen, Clinician Scientist in CAMH's Geriatric Division and Campbell Family Mental Health Research Institute. "They can be reassured that they are unlikely to develop dementia, and the other causes of memory loss should be addressed."

In other cases, the partner or caregiver is more likely to be distressed while patients don't feel they have any [memory problems](#). In Alzheimer's disease, lack of awareness is linked to more burden on caregivers. Both unawareness of illness (anosognosia) and memory loss (known as mild cognitive impairment) can be objectively assessed using questionnaires.

The study, believed to be the largest of its kind on illness awareness, had data on 1,062 people aged 55 to 90 from the Alzheimer's Disease Neuroimaging Initiative (ADNI). This included 191 people with Alzheimer's disease, 499 with mild cognitive impairment and 372 as part of the healthy comparison group.

The researchers also wanted to identify which parts of the brain were affected in impaired illness awareness. They examined the brain's uptake of glucose, a type of sugar. Brain cells need glucose to function, but glucose uptake is impaired in Alzheimer's disease.

Using PET brain scans, they showed that those with impaired illness awareness also had reduced glucose uptake in specific brain regions, even when accounting for other factors linked to reduced [glucose uptake](#), such as age and degree of [memory loss](#).

As the next stage of this research, Dr. Gerretsen will be tracking older adults with [mild cognitive impairment](#) who are receiving an intervention to prevent Alzheimer's dementia. This ongoing study, the PACt-MD study, combines brain training exercises and brain stimulation, using a mild electrical current to stimulate brain cells and improve learning and [memory](#). While the main study is focused on dementia prevention, Dr. Gerretsen will be looking at whether the intervention improves illness awareness in conjunction with preventing progression to dementia.

More information: Philip Gerretsen et al, Anosognosia Is an Independent Predictor of Conversion From Mild Cognitive Impairment to Alzheimer's Disease and Is Associated With Reduced Brain Metabolism, *The Journal of Clinical Psychiatry* (2017). [DOI: 10.4088/JCP.16m11367](#)

Provided by Centre for Addiction and Mental Health

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