

Dementia patients reveal how we construct a picture of the future

May 23 2012

(Medical Xpress) -- Our ability to imagine and plan our future depends on brain regions that store general knowledge, new research shows.

Dr. Muireann Irish from [Neuroscience Research](#) Australia (NeuRA) found that [dementia patients](#) who can no longer recall [general knowledge](#) – for example, the names of famous people or popular songs – are also unable to imagine themselves in the future.

"We already know that if memory of past events is compromised, as is the case in Alzheimer's disease, then the ability to imagine future scenarios is also impaired," says Dr. Irish.

"We have now discovered that damage to parts of the brain that store knowledge of facts and meanings can also produce the same effect," she says.

Thinking about the future is an important ability because it helps us to plan and anticipate the consequences of our actions.

"For example, a person with dementia who may leave the oven on, partly because they forget the appropriate action, but also because they cannot project forward in time to anticipate the dangerous consequences this might have," says Dr. Irish.

Dr. Irish and colleagues used MRI to study people with Alzheimer's disease (memories of past experiences are lost) as well as patients with

semantic dementia who have lost the ability to remember facts (semantic memory) but have little problem remembering past experiences.

Surprisingly, she found that the semantic [dementia](#) group was as impaired as the Alzheimer's group when imagining future events, even though their memory of past experiences was relatively intact.

"This is an important finding, as it points to multiple regions in the [brain](#) that are responsible for our ability to imagine and plan for the future," she says.

This research is published in the journal [Brain](#).

Provided by Neuroscience Research Australia

Citation: Dementia patients reveal how we construct a picture of the future (2012, May 23) retrieved 3 May 2024 from

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