

Why Alzheimer's Patients Stop Recognizing Loved Ones

One of the most heartbreaking things about Alzheimer's disease is it not only steals people's memories but also their ability to recognize the faces of their loved ones, and now researchers say they now know why this occurs.

In addition to causing memory problems, Alzheimer's disease also robs people of their perception to discern facial features, a Canadian research team says.

Face perception plays a fundamental role in human communication, which is why humans have evolved into experts at quickly detecting and identifying faces.

This faculty is thought to depend on the ability to perceive a face as a whole. Also known as "holistic perception," this ability is in contrast to the local and detailed analysis required to perceive individual facial features, such as the eyes, nose or mouth.

For the study, the Montreal team recruited people with Alzheimer's along with healthy seniors to study their ability to perceive faces and cars in photos that were either upright or upside down.

The results for people with Alzheimer's were similar to those in the control group in terms of answer accuracy and the time to process the upside-down faces and cars. However, with the upright faces, people with Alzheimer's were much slower and made more mistakes than the healthy individuals.

Subjects with Alzheimer's disease also demonstrated normal recognition of the upright cars, a task that in theory does not require holistic processing. This suggests that Alzheimer's leads to visual perception problems specifically

with faces, the researchers say. They were also surprised to find that that this impairment was observed in the very early stages of the disease, they added.

The researchers hope their finding that impaired facial recognition might stem from a holistic perception problem—and not just a general memory problem—opens the door to different strategies, such as using recognition of particular facial traits or voice recognition, to help patients recognize their loved ones for longer, they say of their study, which appears in the *Journal of Alzheimer's Research*.

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