

Insights on the link between chronic stress and Alzheimer's disease

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Chronic psychosocial stress—which involves a pathway called the hypothalamic-pituitary-adrenal axis (HPA axis)—may contribute to the

development of Alzheimer's disease. A new review published in *Biological Reviews* describes how environmental and genetic factors can impact individuals' HPA axis, and ultimately their risk of Alzheimer's disease.

The review also proposes a mechanism by which [genetic factors](#) that influence the HPA axis may also affect inflammation, a key driver of neurodegeneration.

"What we know is that [chronic stress](#) does affect many biological pathways within our body. There is an intimate interplay between exposure to chronic stress and pathways influencing the body's reaction to such stress," said senior author David Groth, Ph.D., of Curtin University, in Australia. "Genetic variations within these pathways can influence the way the brain's immune system behaves leading to a dysfunctional response. In the brain, this leads to a chronic disruption of normal brain processes, increasing the risk of subsequent neurodegeneration and ultimately dementia."

June is [Alzheimer's & Brain Awareness Month](#).

More information: Ayeisha Milligan Armstrong et al, Chronic stress and Alzheimer's disease: the interplay between the hypothalamic–pituitary–adrenal axis, genetics and microglia, *Biological Reviews* (2021). [DOI: 10.1111/brv.12750](https://doi.org/10.1111/brv.12750)

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