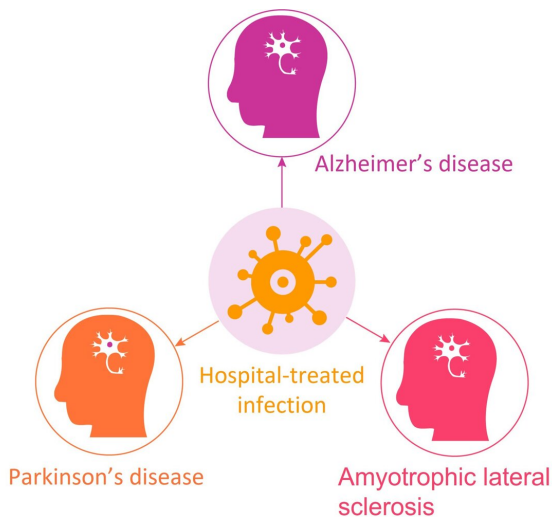


# Repeated infections associated with increased risk of some neurodegenerative diseases

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Researchers assess hospital-treated infection and risk of neurodegenerative diseases. Created with Adobe Illustrator. Credit: Jiangwei Sun (CC-BY 4.0, [creativecommons.org/licenses/by/4.0/](https://creativecommons.org/licenses/by/4.0/))

Infections treated with specialty hospital care in early- and mid-life are associated with an increased subsequent risk of Alzheimer's (AD) and Parkinson's diseases (PD), but not amyotrophic lateral sclerosis (ALS), according to a new study publishing September 15 in the open-access journal *PLOS Medicine* by Jiangwei Sun of Karolinska Institute, Sweden, and colleagues.

Experimental studies in animals have suggested that [infection](#) plays a role in the development of some neurodegenerative diseases, but supporting evidence in humans is limited. In the new study, researchers used data on people diagnosed with AD, PD or ALS from 1970–2016 in Sweden, as well as five matched controls per case, all identified from the Swedish National Patient

Register. The analysis included 291,941 AD cases, 103,919 PD cases and 10,161 ALS cases.

A hospital-treated infection five or more years before diagnosis was associated with a 16% higher risk of AD (95%CI: 1.15–1.18, P

"These findings suggest that infectious events may be a trigger or amplifier of a pre-existing disease process, leading to clinical onset of neurodegenerative disease at a relatively early age," the authors say, while also pointing out that "due to the observational nature of the study, these results do not formally prove a [causal link](#)."

Sun adds, "Hospital-treated infections, especially in early- and mid-life, were associated with an increased risk of Alzheimer's disease (AD) and Parkinson's disease (PD), primarily among AD and PD cases diagnosed before 60 years."

**More information:** Hospital-treated infections in early- and mid-life and risk of Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis: A nationwide nested case-control study in Sweden, *PLoS Medicine* (2022). [DOI: 10.1371/journal.pmed.1004092](https://doi.org/10.1371/journal.pmed.1004092)

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