

# Cold sores increase the risk of dementia

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Infection with herpes simplex virus increases the risk of Alzheimer's disease. Researchers at Umeå University, Sweden, claim this in two studies in the journal *Alzheimer's & Dementia*.

"Our results clearly show that there is a link between infections of [herpes simplex virus](#) and the risk of developing Alzheimer's disease. This also means that we have new opportunities to develop treatment forms to stop the disease," says Hugo Lövheim, associate professor at the Department of Community Medicine and Rehabilitation, Geriatric Medicine, Umeå University, who is one of the researchers behind the study.

Alzheimer's disease is the most common among the dementia diseases. In recent years research has increasingly indicated that there is a possible connection between [infection](#) with a common herpes virus, herpes [simplex virus](#) type 1, and Alzheimer's disease. A majority of the population carries this virus. After the first infection the body carries the virus throughout your lifetime, and it can reactivate now and then and cause typical mouth ulcer. The hypothesis which links the herpes virus and Alzheimer's disease is based on that a weakened immune system among the elderly creates opportunities for the virus to spread further to the brain. There this can in turn start the process which results in Alzheimer's disease.

Hugo Lövheim and Fredrik Elgh, professor at the Department of Virology, have now confirmed this link in two large epidemiological studies. In one study, which is based on the Betula project, a study on ageing, memory and dementia, the researchers show that a reactivated

herpes infection doubled the risk of developing Alzheimer's disease. This study had 3,432 participants who were followed for 11.3 years on average. In another study, samples donated to the Medical Biobank at Umeå University from 360 people with Alzheimer's disease were examined and as many matched people who had not developed dementia. The samples were taken on average 9.6 years before diagnosis. This study showed an approximately doubled risk of developing Alzheimer's disease if the person was a carrier of the herpes virus.

"Something which makes this hypothesis very interesting is that now herpes infection can in principle be treated with antiviral agents. Therefore within a few years we hope to be able to start studies in which we will also try treating patients to prevent the development of Alzheimer's disease," says Hugo Lövheim.

**More information:** Reactivated herpes simplex infection increases the risk of Alzheimer's disease [www.ncbi.nlm.nih.gov/pubmed/25043910](http://www.ncbi.nlm.nih.gov/pubmed/25043910)

Herpes simplex infection and the risk of Alzheimer's disease – A nested case-control study [\(14\)02770-8/abstract](http://www.alzheimersanddementia.com/...)

Provided by Umea University

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