

Statins can protect against Alzheimer's disease

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High cholesterol levels are considered to be a risk factor not only for cardiovascular disease including stroke, but also for the development of Alzheimer's disease. Therefore, many cholesterol lowering drugs, including statins, have been developed in recent years. In addition to the cholesterol reducing effect of statins Amalia Dolga, PhD, of the University of Groningen, The Netherlands, and her co-investigators have demonstrated that statins can protect nerve cells against damage which we know to occur in the brain of Alzheimer's disease patients. The results are published in the June issue of the *Journal of Alzheimer's Disease*.

How [nerve cells](#) die in Alzheimer's disease is complex but we know that nerve cells eventually die because they are strongly overstimulated, a process called excitotoxicity. In animal experiments conducted in the laboratory of Professor Ulrich Eisel, Department of Molecular Neurobiology, University of Groningen, Dolga and colleagues overstimulated such nerve cells.

They clearly demonstrated that treatment with a statin called Lovastatin could prevent the death of nerve cells under these conditions. The statins not only prevented cells from dying but also prevented the loss of [memory capacity](#) that normally occurs after such cell death. In a previous study Dolga had showed that these statins stimulate the protective capacity of tumor necrosis factor, which is a key player in the brain's immune response.

Dolga has demonstrated in animal experiments that this [tumor necrosis factor](#) has a strong beneficial effect on nerve cells and can protect nerve cells against death. A widely prescribed drug like [statins](#) can activate this protective pathway revealing strong beneficial effect.

More information: The article "Pretreatment with Lovastatin Prevents N-Methyl-D-Aspartate-Induced Neurodegeneration in the Magnocellular Nucleus Basalis and Behavioral Dysfunction" Amalia M. Dolga, Ivica Granic, Ingrid M. Nijholt, Csaba Nyakas, Eddy A. van der Zee, Paul G. M. Luiten, and Ulrich L. M. Eisel is published in Volume 17:2 (June 2009) of the *Journal of [Alzheimer's Disease](#)*.

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