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Drug that lowers blood pressure might help prevent Alzheimer's disease

Alzheimer disease (AD), a neurodegenerative disease that is the most common form of dementia, is characterized by the formation in the brain of plaques containing misfolded beta-amyloid protein. Recent evidence indicates that some drugs used to treat high blood pressure (antihypertensive medications) might reduce the risk of developing AD. In a new study, in which they screened 55 antihypertensive medications in vitro for potential AD-modifying activity, Giulio Maria Pasinetti and colleagues at Mount Sinai School of Medicine, New York, have identified one antihypertensive medication with the ability to reduce AD-like disease in mice.

Only 7 of the 55 antihypertensive medications screened were able to reduce AD-like accumulation of beta-amyloid protein in cultured neurons isolated from mice engineered to be susceptible to an AD-like disease (Tg2576 mice). Of these 7, only 1 (valsartan) was able to markedly reduce the oligomerization of beta-amyloid protein, a feature of memory deterioration. As treatment of Tg2576 mice with valsartan, both before and after the onset of AD-like disease, reduced the severity of disease, the authors suggested that treatment with certain antihypertensive agents might be of benefit to individuals with, or at high risk of developing, AD.

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TITLE: Valsartan lowers brain beta-amyloid protein levels and improves spatial learning in a mouse model of Alzheimer disease

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