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Alzheimer's 'early signs timeline developed'

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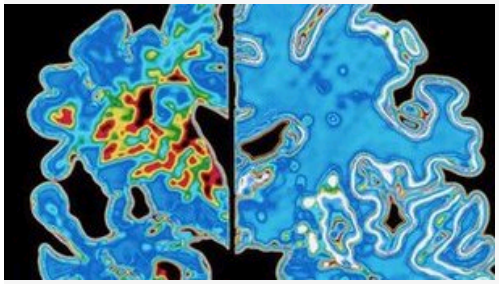

Protein plaques in the brain indicate Alzheimer's disease

Scientists have assembled a "timeline" of the unseen progress of Alzheimer's before symptoms appear.
A team at Washington University School of Medicine looked at families with a genetic risk of the dise
Writing in the New England Journal of Medicine, they say signs appeared up to 25 years before the exp
onset of the disease.
UK experts said the ability to detect Alzheimer's early would give the best chance of successful treatment.

'Key changes'

The 128 people in the study, from the UK, US and Australia, had a 50% chance of inheriting one of thr
mutations that are certain to cause early Alzheimer's, which often develops in people's 30s and 40s -
earlier than the more common form of Alzheimer's which generally affects people in their 60s.
Those who carry the mutations will go on to develop the disease.
The researchers looked at the age the participants' parents were when they developed the disease - ar
therefore how many years it was likely to be before they too showed symptoms.

"Start Quote

The ability to detect the very earliest stages of Alzheimer's... would enable new drugs to be trialled in the right pe
at the right time"

Dr Eric Karran Alzheimer's Research UK

They underwent blood and spinal fluid tests as well as brain scans and mental ability assessments.
The earliest change - a drop in spinal fluid levels of the key ingredient of Alzheimer's brain plaque
can be detected 25 years before the anticipated age of disease onset, they suggest.
At 15 years, raised levels of tau, a structural protein in brain cells can be seen in spinal fluid -
shrinkage can also be detected within parts of the brain.
Changes in the brain's use of the sugar glucose and slight memory problems become apparent 10 years b
symptoms would appear, they suggest.
Researchers also tested other members of the families without the inherited mutations - and found no

changes in the markers they tested for.

Prof Clive Ballard, director of research at the Alzheimer's Society, said: "This important research highlights that key changes in the brain, linked to the inherited form of Alzheimer's disease, happen decades before symptoms show, which may have major implications for diagnosis and treatment in the fu

"These findings are a good indicator that there may be key changes in the brain happening early in pe who develop non-hereditary Alzheimer's disease, but we can't be sure. Further research into this comp condition is needed to confirm a definite link."

And Dr Eric Karran, director of Research at Alzheimer's Research UK, said: "These results from people the inherited form of Alzheimer's seem to be very similar to the changes in the non-genetic, common f of the disease.

"It's likely that any new treatment for Alzheimer's would need to be given early to have the best cha of success.

"The ability to detect the very earliest stages of Alzheimer's would not only allow people to plan ar