



Tau Protein

[Source: DTE](#)

A new study suggests **blocking the stress response pathway** in the brain could reverse [Alzheimer's symptoms](#) by preventing **tau protein** accumulation.

- Alzheimer's disease is a **progressive neurodegenerative disorder** causing **memory loss, cognitive decline, and behavioral changes**. It is the most common cause of dementia, responsible for 60-80% of cases.
- **Tau proteins** stabilize neurons, but in **Alzheimer's, they accumulate** and form **neurofibrillary tangles** that disrupt **neuron communication**, a characteristic of Alzheimer's disease, contributing to cognitive decline.
 - Blocking **toxic lipid synthesis** in the brain could **prevent tau buildup**, offering potential symptom reversal.
 - These toxic lipids are produced by **microglia** - brain immune cells that can either protect or worsen neurodegeneration. They damage neurons, accelerating neurodegeneration.
 - A stress response pathway activates microglia, leading to this toxic lipid production.
- While current treatments **delay cognitive decline**, they cannot halt disease progression. **Targeting the microglial stress response pathway** may offer more effective therapies.

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WHAT IS ALZHEIMER'S DISEASE?

Alzheimer's disease is the most common form of dementia and causes memory loss, difficulty performing daily tasks, and changes in judgement, reasoning, behaviour, and emotions.



WHO IS MOSTLY AFFECTED BY THE DISEASE?

OLDER PERSONS SUFFERING FROM DEPRESSION:

4 TIMES HIGHER AT RISK

Depression is a strong contributor to developing dementia.



WOMEN: 72% of patients are female



SENIORS: 25% 85+ years old
5% 65+ years old

IDENTIFYING THE WARNING SIGNS: ONSET SYMPTOMS OF ALZHEIMER'S DISEASE

COGNITIVE SIGNS



- Frequent memory loss that requires extensive reminders or begins to disrupt daily life
- Solving simple problems becomes more challenging
- Understanding images and navigating spaces can be confusing
- Uncertainty over current time and location of events

EMOTIONAL SIGNS



- Strong feelings of depression, confusion, fear, and anxiety
- Expresses sudden confusion with daily and simple repeated tasks (i.e. tying shoes)

BEHAVIOURAL SIGNS



- Withdrawal from social activities
- Exercising poor judgement, acting impulsively or being easily influenced
- Difficulty recalling words



NEARLY 60% OF CASES GO UNDIAGNOSED

If you feel that a family member or loved one is exhibiting many of the symptoms of the disease listed above, please have them visit a doctor for a professional diagnosis.



EARLY DETECTION IS ESSENTIAL TO:

- Increasing the success of treatments
- Providing family and friends the ability to treat their loved one more effectively and considerately
- Helping the individual to avoid injuries and falls



Read more: [Alzheimer's Disease](#)

PDF Refernece URL: <https://www.drishtias.com/printpdf/tau-protein>

