



## 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?

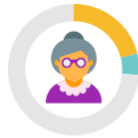
OLDER PERSONS SUFFERING FROM DEPRESSION:

**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>

