

مرض الزهايمر انذكر معنا ٤ مرات ....  
في التيرم مرتين وفي البيوكم مرتين 😊.

في التيرم المحاضرة الاولى انذكر على انه مثال على ال Eponyms ..... هذي  
اول معلومة .

انذكر مرة ثانية في التيرم في محاضرة ال nervous system 🤔🌟🤔.  
كان موجود في الجداول من الامراض المتعلقة بالعقل .  
طبعا الدكتور سمير ركز على الخصائص تاعته وشو الاعراض .

Alzheimer's disease 📌 disorder characterized by  
progressive dementia, disorientation, apathy, and loss of  
memory .

انذكر كمان مرتين في البيوكم .. والمرتين تبعات البيوكم داخلات في مادة  
الفاينل 🐱 .

اول مرة في محاضرة 4 protein .... طبعا انحكي عنه في ٣ سلايدات ...  
طبعا الدكتور حكى عدة معلومات مهمة عنه ، حكى اهم اعراضه كثرة النسيان  
حتى يصل الى نسيان الاهل والاصدقاء ، وانه ممكن ينتقل عبر الجينات ....  
وحكى عن اسباب المرض وشو بيصير للخلايا العصبية في الدماغ .. وهي  
التفاصيل بالصور 👍

المرة الرابعة كانت في المخاضرة الأخيرة لدكتور سمير vitamin 1

الحمد لله موجودة في شرح أول فيتامين اللي هو B1 = thiamin

كان بيحكي انه هذا الفيتامين ممكن استعمله في علاج الزهايمر .. بس 😊 .

Therapy : it can be used for treatment of heart failure & Alzheimer disease .

ختام التجميع ... المكابدة امر محتوم وسنة الله في الأرض ، بس انت بدك  
تعرف على ايش حتكابد وعشان ايش بتتعب ... قال تعالى { لقد خلقنا الإنسان  
في كبد { يعني مكابدة للدنيا .  
عشان توصل للمكان العالي لابد تكابد وتتعب وتجتهد 🌹 👍 ...  
والله اعلم ... بالتوفيق 🌹 👍

## Alzheimer Disease (AD)

Alzheimer disease (AD) is the fourth leading cause of death in adults. AD is twice as common in women than in men.

Some of the most frequently observed symptoms of the disease include a progressive inability to remember facts and events and, later, to recognize friends and family.

AD tends to run in families; currently, mutations in four genes, situated on chromosomes 1, 14, 19, and 21, are believed to play a role in the disease.

Research indicates that the disease is associated with plaques (extracellular deposits of amyloids (insoluble fibrous protein)) in the gray matter of the brain and tangles (aggregates of hyperphosphorylated tau protein (proteins that stabilize microtubules)) in the brain.

### Several competing hypotheses exist trying to explain the cause of the disease:

1-The oldest one is the *cholinergic hypothesis*, which proposes that AD is caused by reduced synthesis of the neurotransmitter acetylcholine.

2-The amyloid hypothesis postulated that beta-amyloid deposits are the fundamental cause of the disease.

Recently, use of a mouse model of the disease identified an enzyme that may be responsible for the increase in amyloid production characteristic of AD.

If a way to regulate this enzyme could be found, then AD may be slowed or halted in some people.

## Protein Misfolding in AD

In AD, the misfolded proteins are beta-amyloid and a cleaved product of tau. Misfolded proteins then begin to stick together with other misfolded proteins to form insoluble aggregates, leading to disruption of communication, and metabolism, and even to cell death.

There are three major hallmarks in the brain that

Normal	Alzheimer's
100% normal	100% abnormal

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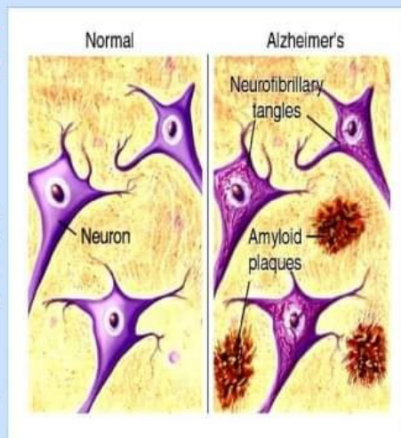
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**Protein Misfolding in AD**

In AD, the misfolded proteins are beta-amyloid and a cleaved product of tau. Misfolded proteins then begin to stick together with other misfolded proteins to form insoluble aggregates, **leading to disruption of cellular communication, and metabolism, and even to cell death.**

**There are three major hallmarks in the brain that are associated with AD:**

- 1- Amyloid plaques
- 2- Neurofibrillary tangles —that are made of misfolded proteins. This is especially true in certain regions of the brain that are important in memory.
- 3- Loss of connections between cells this leads to diminished cell function and cell death



**Mad cow disease**

Bovine spongiform encephalopathy (BSE), commonly known as mad cow disease, is a fatal neurodegenerative disease in cattle that causes a spongy degeneration in the brain and spinal cord



The disease may be most easily transmitted to human beings by