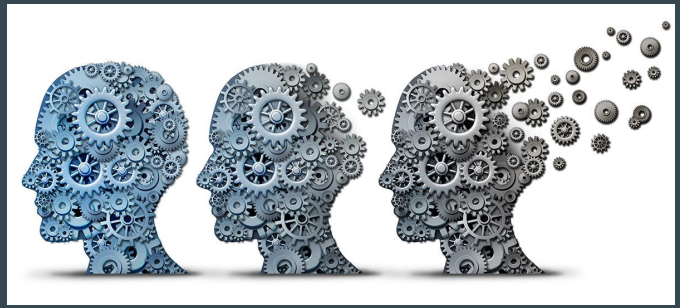
Alzheimer's Disease

By: Katherine, Nick, Srikar, Timothy, Joon, and Keshava

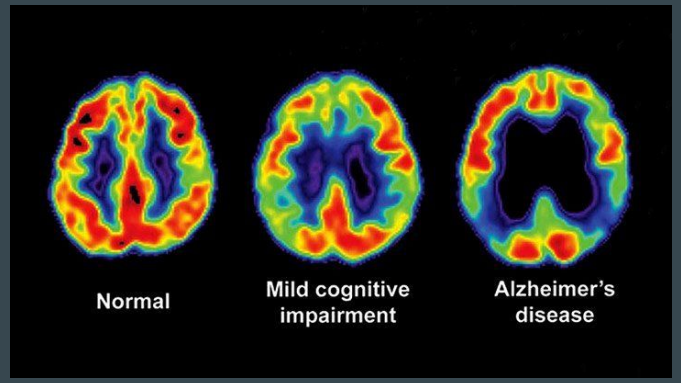
Symptoms - Katherine

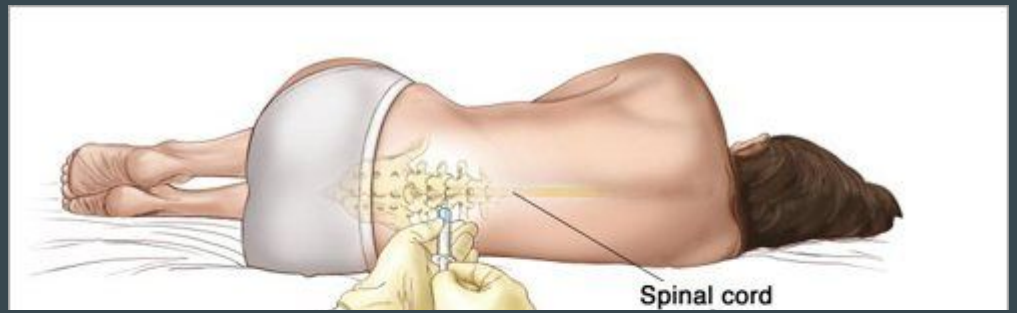


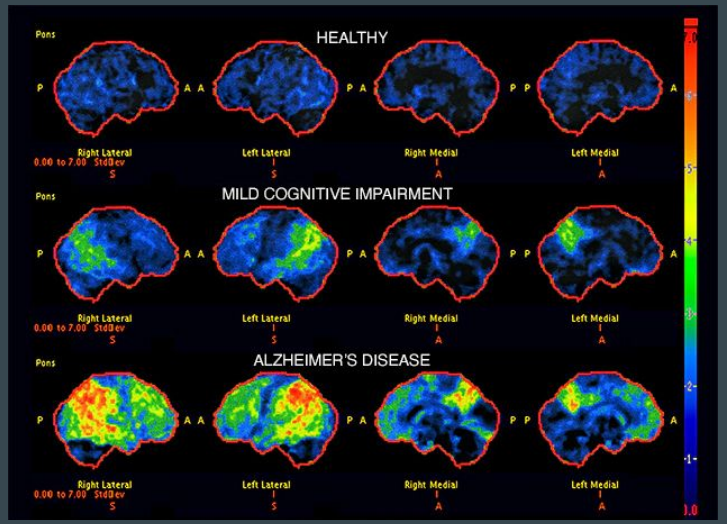
- Memory problems
- Disorientation
- Problems with speech or language
- Obsessive Behaviour
- Delusion and hallucination during later stages

Diagnostics - Joon

- Neurological Exams
- Cognitive and functional assessments
- Brain imaging (MRI, CT, PET)
- Cerebrospinal fluid or blood test







Causes - Nick

Age: Advanced age is the greatest known risk factor for Alzheimer's disease. The likelihood of developing the disease increases significantly after the age of 65.

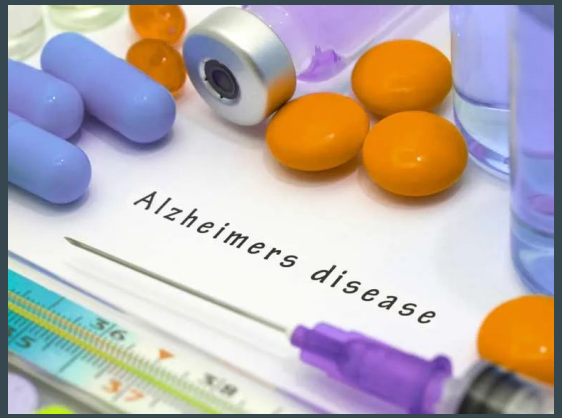
Genetics: Certain genetic mutations and variations are associated with an increased risk of Alzheimer's. Mutations in genes such as **APP**, **PSEN1**, and **PSEN2** can lead to early-onset familial Alzheimer's disease.

Family History: Having a family history of Alzheimer's disease can increase the risk of developing the condition, especially in cases of early-onset Alzheimer's.

APP Gene

Treatment - Srikar

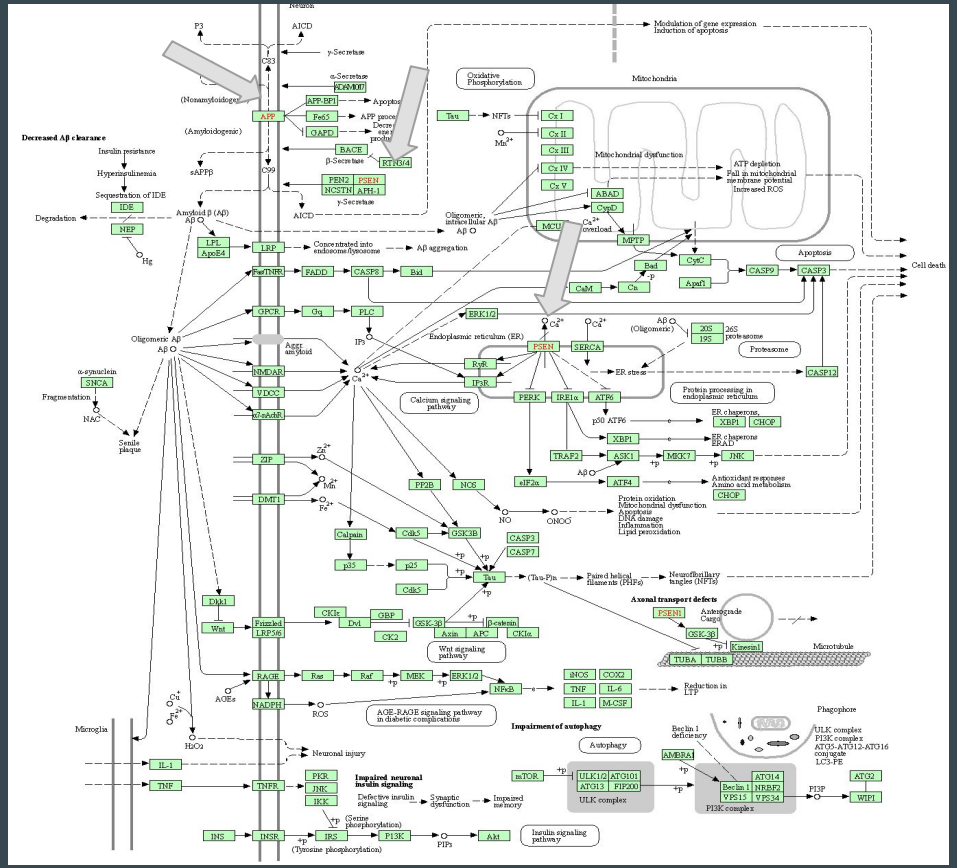
- Cholinesterase Inhibitors like Galantamine, rivastigmine, and donepezil can reduce or control some cognitive and behavioral symptoms.
- Exercise, eat healthy, spend time with loved ones, keep up interest and hobbies



Genes - Keshava

- Amyloid precursor protein (APP) on chromosome 21 - This protein is found in many tissues and organs, including the brain and spinal cord (central nervous system).
- Presenilin 1 (PSEN1) on chromosome 14 - Mutations in this gene cause the creation of a defective presenilin 1 protein
- Presenilin 2 (PSEN2) on chromosome 1

Alzheimer's disease - Kegg Pathway



Social Impact

Alzheimer's can have a number of social impacts that can worsen as the disease progresses. These can include:

- Financial strain from treatment/care for patient
- Strained relationships
- Self-Isolation
- Declining mental health
- Difficulty taking care of oneself