Alzheimer's Disease

Dr. Alois Alzheimer (1864-1915)

- Studied a patient with interesting symptoms; couldn't remember their name or write it down. Patient's condition deteriorated until they eventually died.
- Autopsy revealed abnormalities when certain stains were used on brain tissue, suggesting a problem in the neurons.
- Two changes were observed: appearance of amyloid plaques and the occurrence of neurofibrillary tangles.

Occurrence of Alzheimer's

- Incidence of the disease is increasing as the majority of the population are elderly, and the elderly are most affected.

Neuropathology

- Hippocampus: area linked to the formation of new memories.
- Broca's and Ammon's cortices: important for normal memory functioning and first affected by Alzheimer's in the side of initiation. These cortices are the intermediaries between the cortex and hippocampus so requiring many Ting amounts of data.
- Gross Pathology: damage that can be seen.

Charting Progression

- **Early** - damage begins in the entorhinal cortex and brainstem. 10-20 years before symptoms appear, and entorhinal cortex begins to shrink.
- **Mild** - hippocampus and general overall cortex shrinks and ideas appear around the ramification. Symptoms begin to appear (memory loss, confusion) so diagnosis generally occurs now.
- **Moderate** - further memory loss, decrease in attention span, paranoia, poor impulse control.
- **Severe** - no recognition of others, loss of executive functions and bodily control, eventual death due to brain damage and shut down of body systems. Majority of the cortex is affected, lots of inside shrinking and many gaps appear.

Anticholinergic and Alzheimer's Disease

- Drug treatments aim to inhibit acetylcholine breakdown by blocking acetylcholinesterase; this means more of the neurotransmitter can stimulate receptors.
- Provides some symptom relief but does not stop overall progression or worsening of symptoms.