

Dementia Overview - 102



How the Brain Works and Stages of Dementia

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Dementia Overview - 102

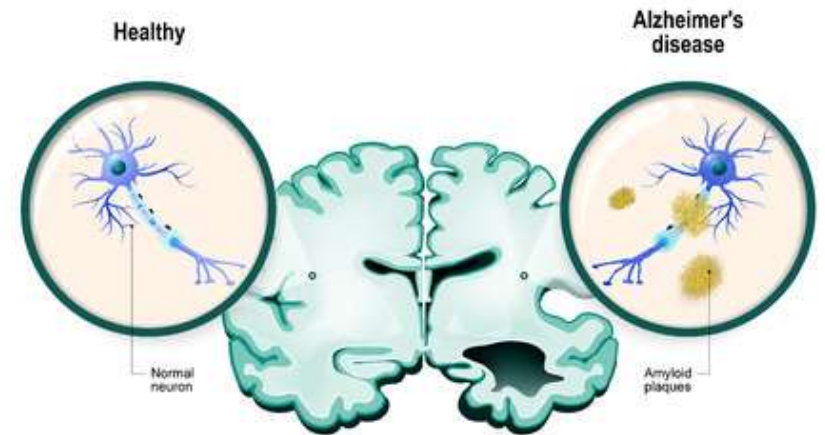
- How the brain works
- Understanding dementia progression in stages
- Seven stages of Alzheimer's disease

How the Brain Works

- The adult brain weighs about 3 pounds and has a jelly-like consistency
- About 25 percent of the body's blood supply flows to the brain
- The brain uses nutrients and oxygen from the blood to function
- When a person is thinking really hard, the brain needs more nutrients and oxygen from the blood

How the Brain Works

- The brain has about 100 billion **nerve cells**, which are called **neurons**
- The **connections** between neurons are called **synapses**
- The **electronic signals** between neurons form the basis of memories, thoughts and feelings



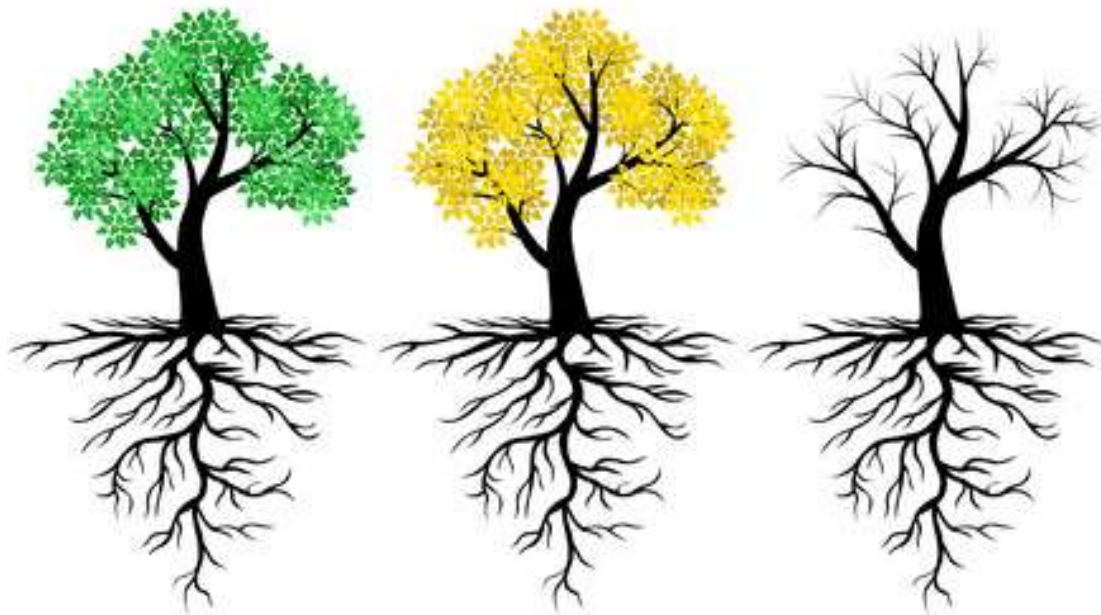
How the Brain Works

- Over time, our experiences create certain routes or patterns in the neuron signals
- Some of these patterns are deeply ingrained and rooted, others are built upon the base memories and experiences



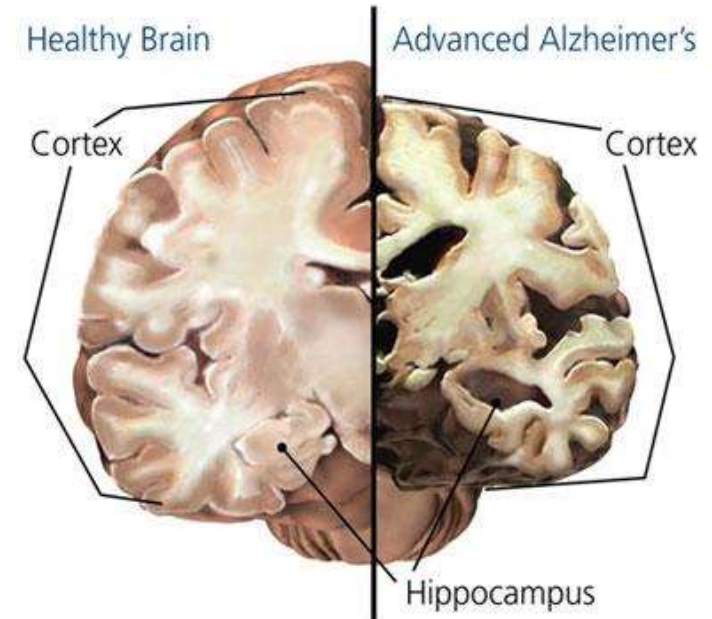
How the Brain Works

- When a person has Alzheimer's Disease, the neurons are damaged and die

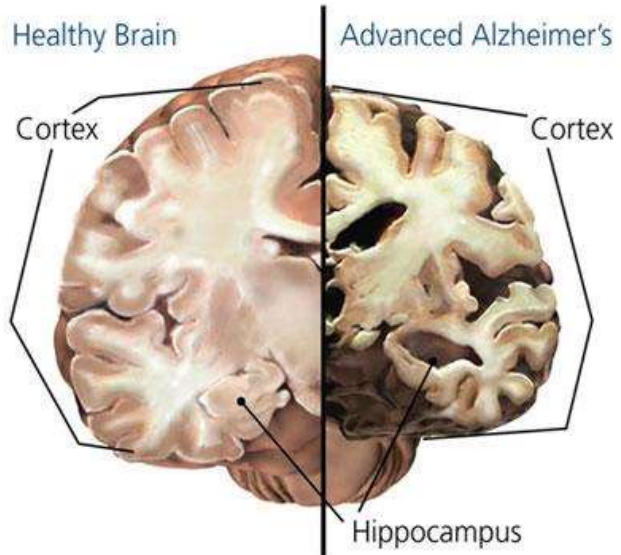


How the Brain Works

- The hippocampus, which is the part of the brain that creates MEMORIES out of EXPERIENCES, is one of the most severely affected by Alzheimer's disease.



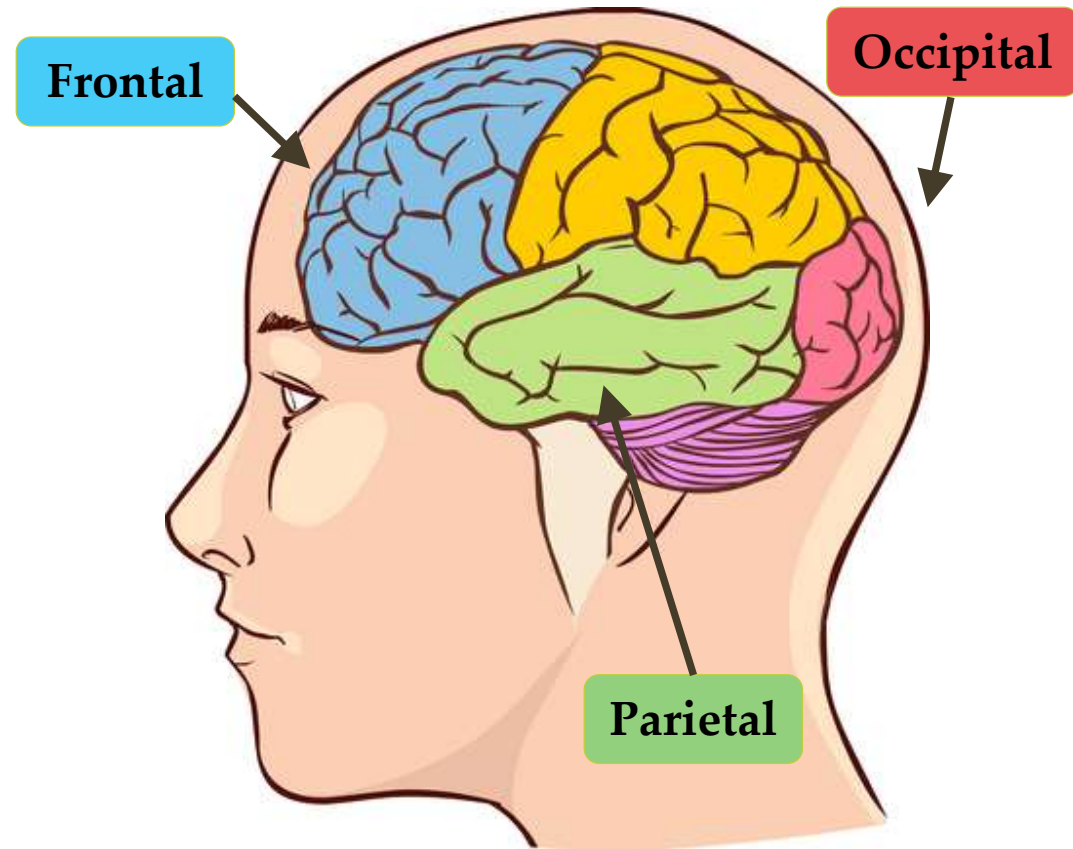
How the Brain Works



How the Brain Works

Different parts of the brain affect different functional abilities:

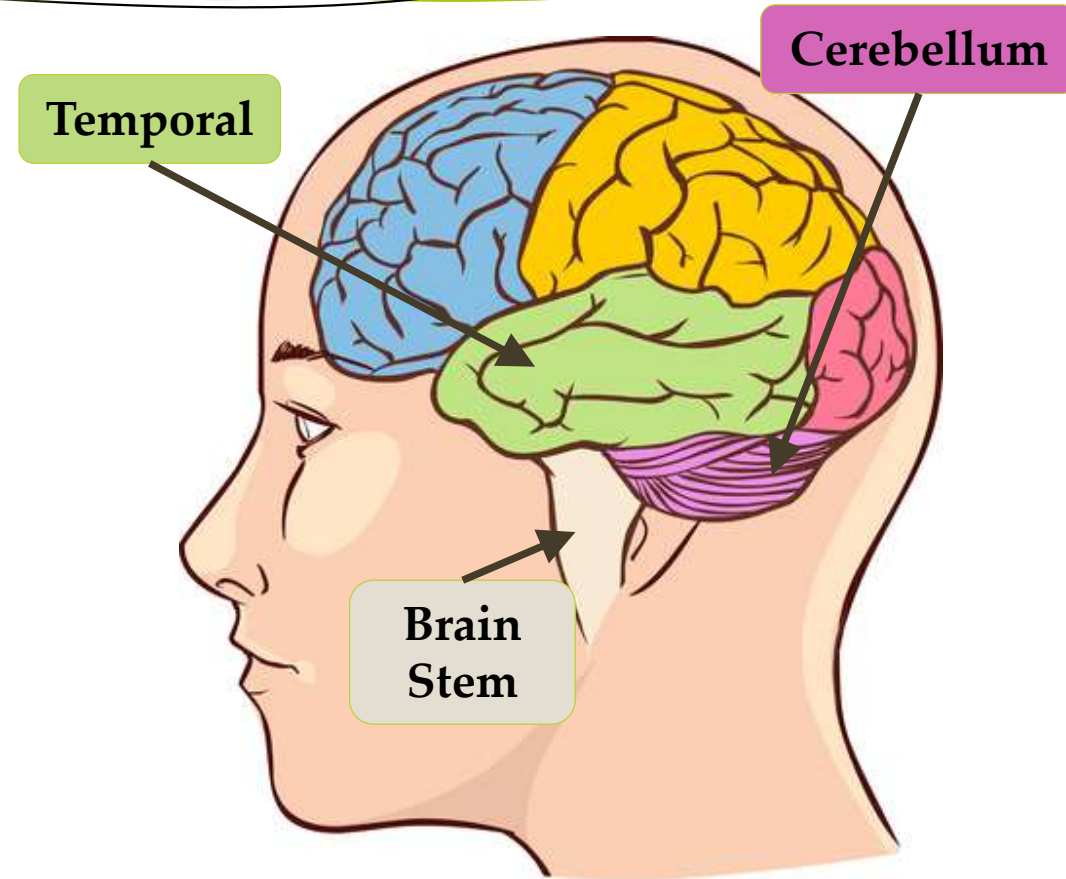
- **Occipital lobe** controls vision and visual comprehension
- **Parietal lobe** controls spatial reasoning, perception and sensation
- **Frontal lobe** controls emotions, problem solving and decision making



How the Brain Works

Different parts of the brain affect different functional abilities:

- **Temporal lobe** controls learning, memory, hearing, language (ability to communicate or understand communication)
- **Cerebellum** controls posture, balance and coordination
- **Brain stem** controls automatic processes such as breathing, sleeping, eating



Dementia Progression in Stages

Mild Cognitive Impairment (MCI)

- The brain is **not functioning optimally**
- A person with MCI can still function well
- Mild cognitive impairment is not considered to be dementia

Dementia Progression in Stages

Early Stages

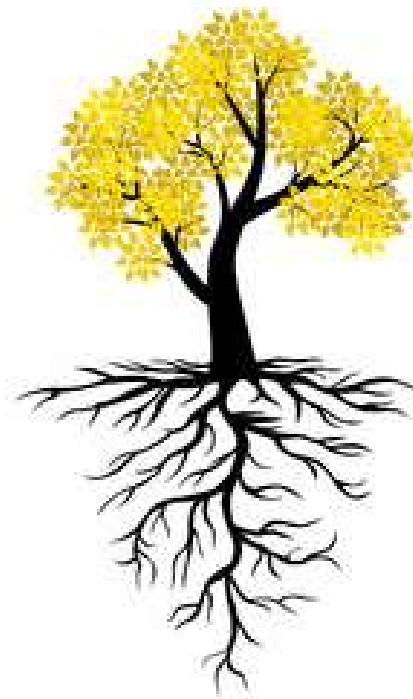
- Begins to show **symptoms that are noticeable to others**
- “Something is wrong”



Dementia Progression in Stages

Middle Stages

- Require increasing **assistance** from others.
- **Behaviors and personality** begin to change
- **Safety** awareness is diminished
- May not **dress** appropriately without assistance
- Will need help to maintain **hygiene**



Dementia Progression in Stages

Late Stages

- Without assistance from others, a person **will not survive** in the late stages of dementia
- A person will need **24 hour a day supervision** for safety and care
- **Basic functions** are difficult or impossible to complete



Seven Stages of Alzheimer's Disease*

Stage 1: **No Impairment**

- Cell damage is occurring

Stage 2: **Very Mild Decline**

- Difficult to tell from normal aging

Stage 3: **Mild Decline**

- Difficulty with complicated tasks
 - Uses coping mechanisms such as lists, talking to self, making excuses.

Mild Dementia



*as developed by Dr. Barry Reisberg, M.D.

Seven Stages of Alzheimer's Disease*

Stage 4: Moderate Decline

- Help from others is needed, but can still perform many activities independently
 - Can still do personal care tasks, becomes more rigid about routines and time, likes to keep same patterns

Stage 5: Moderately Severe Decline

- Gaps in memory and thinking, needs help with daily tasks and activities
 - Difficulty with following all of the steps to complete tasks, likes to be busy but not sure what to do, embarrassed about cognitive losses

Moderate Dementia



*as developed by Dr. Barry Reisberg, M.D.

Seven Stages of Alzheimer's Disease*

Stage 6: **Severe Decline**

- Notable personality and behavior changes, physical changes and inability to perform self-care activities
 - Like to touch things, gather things, trouble finding right words, trouble using devices, unable to control impulses
 - Difficulty with verbal communications, not able to relate to others, losing weight, but may still be able to walk

Stage 7: **Very Severe Decline**

- Final stage, loss of verbal abilities, loss of continence, eating abilities, and responsiveness to environments
 - Reflexive behavior, rocking, flexion, and making noises

Severe Dementia



*as developed by Dr. Barry Reisberg, M.D.

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