



"ON STAGE IN THE GOLDEN AGE: THEATRE FOR HEALTHY AGING"



lecompagniemalviste



Module 1



The main mental health disorders in old age: symptoms, warning signs, stages

Elaborated by: Romanian Alzheimer Society



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AGENDA

01. **Introduction**
02. **Cognitive decline**
03. **Neurodegenerative disorders** – warning signs, symptoms, stages
 - dementia
 - Alzheimer disease
 - other forms of dementia
04. **Other neurological disorders** – warning signs, symptoms, stages
 - multiple sclerosis
 - Parkinson's disease



Introduction

- By 2050, the global elderly population is expected to increase from 12% to 22%, reaching 2 billion people.
- In low- and middle-income countries growth is due to lower young-age mortality, allowing more individuals to reach the age of 60.
- In high-income countries rising life expectancy is primarily driven by reduced elderly mortality.
- Over 20% of adults aged 60 and older suffer from mental or neurological disorders (excluding headaches).
- These disorders contribute to 6.6% of disability in this age group, hindering active aging. (N. N., 2021)



Mental health issues differ significantly between younger and older adults:

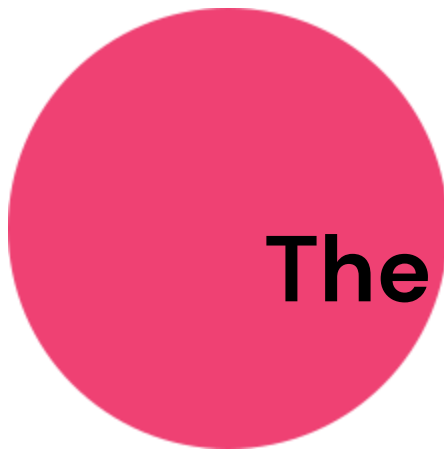
- **Prevalence:** Younger adults experience higher rates of anxiety and depression due to life transitions and social pressures. Older adults are more likely to face dementia and cognitive decline, impacting their mental health.
- **Symptom Presentation:** Younger adults show emotional symptoms like sadness and irritability, while older adults often present with physical complaints like fatigue, complicating diagnosis.
- **Suicide Risk:** Elderly men have the highest suicide rates, driven by loneliness, loss, and poor health.
- **Cognitive Decline & Anxiety:** Anxiety in older adults can overlap with cognitive decline, leading to complex diagnosis and treatment.

Research has linked **social isolation and loneliness** to higher risks for a variety of physical and mental conditions: high blood pressure, heart disease, obesity, a weakened immune system, anxiety, depression, cognitive decline, Alzheimer's disease, and even death.

People who find themselves unexpectedly alone due to the death of a spouse or partner, separation from friends or family, retirement, loss of mobility, and lack of transportation are at particular risk.

Conversely, people who engage in meaningful, productive activities with others tend to live longer, boost their mood, and have a sense of purpose. These activities seem to help maintain their well-being and may improve their cognitive function, studies show.

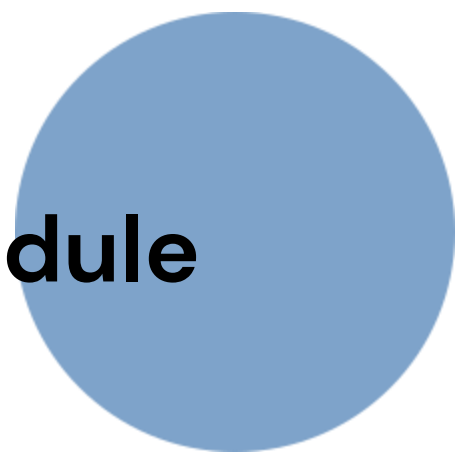




The Importance of Early Detection

Early detection in mental health involves identifying the initial signs and symptoms of mental health disorders before they escalate into severe conditions.

Early detection is not only about recognizing symptoms but also understanding the risk factors that contribute to mental health disorders. (reporting, 2024)

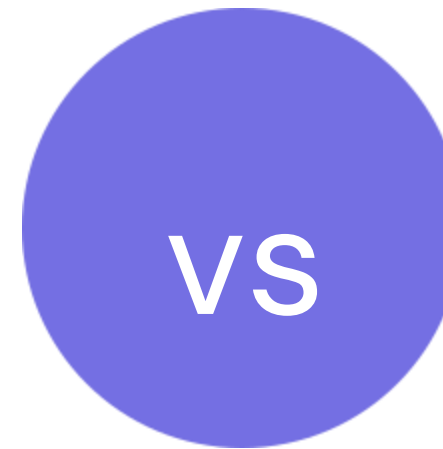


Objectives of the Module

- Understanding cognitive decline in aging and distinguishing it from dementia and Alzheimer's disease.
- Differentiating between mental health and neurological disorders in older adults.



Normal aging



Abnormal aging



Leads to gradual declines in cognitive functions, such as:

- Processing speed: Tasks take longer to complete.
- Memory: Difficulty recalling names or words.
- Language: Increased challenges in word retrieval.
- Visuospatial skills: Struggles with navigation or judging distances.
- Executive function: Multitasking, planning, and organization become harder; mental flexibility declines.

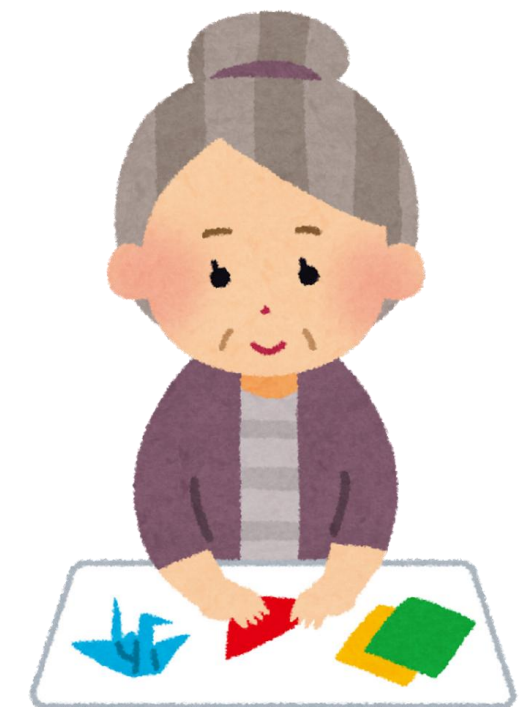
- Getting lost in familiar places,
- Repetitive questioning,
- Unusual behavior,
- Forgetfulness,
- Loss of balance,
- Personality changes,
- Increased apathy



Symptoms of Mild Cognitive Impairment (MCI):

If concerns with mental function go beyond what's expected, the symptoms may be due to mild cognitive impairment (MCI).

- You forget things more often.
- You miss appointments or social events.
- You lose your train of thought. Or you can't follow the plot of a book or movie.
- You have trouble following a conversation.
- You find it hard to make decisions, finish a task or follow instructions.
- You start to have trouble finding your way around places you know well.
- You begin to have poor judgment.
- Your family and friends notice any of these changes.





Mild Cognitive Impairment (MCI) vs. Dementia

MCI involves cognitive decline without affecting daily activities, while dementia refers to declines that impair everyday tasks. Both terms describe severity but not the underlying cause, which may include Alzheimer's, vascular disease, or other neurodegenerative conditions.





Diagnosing mild cognitive impairment (MCI)

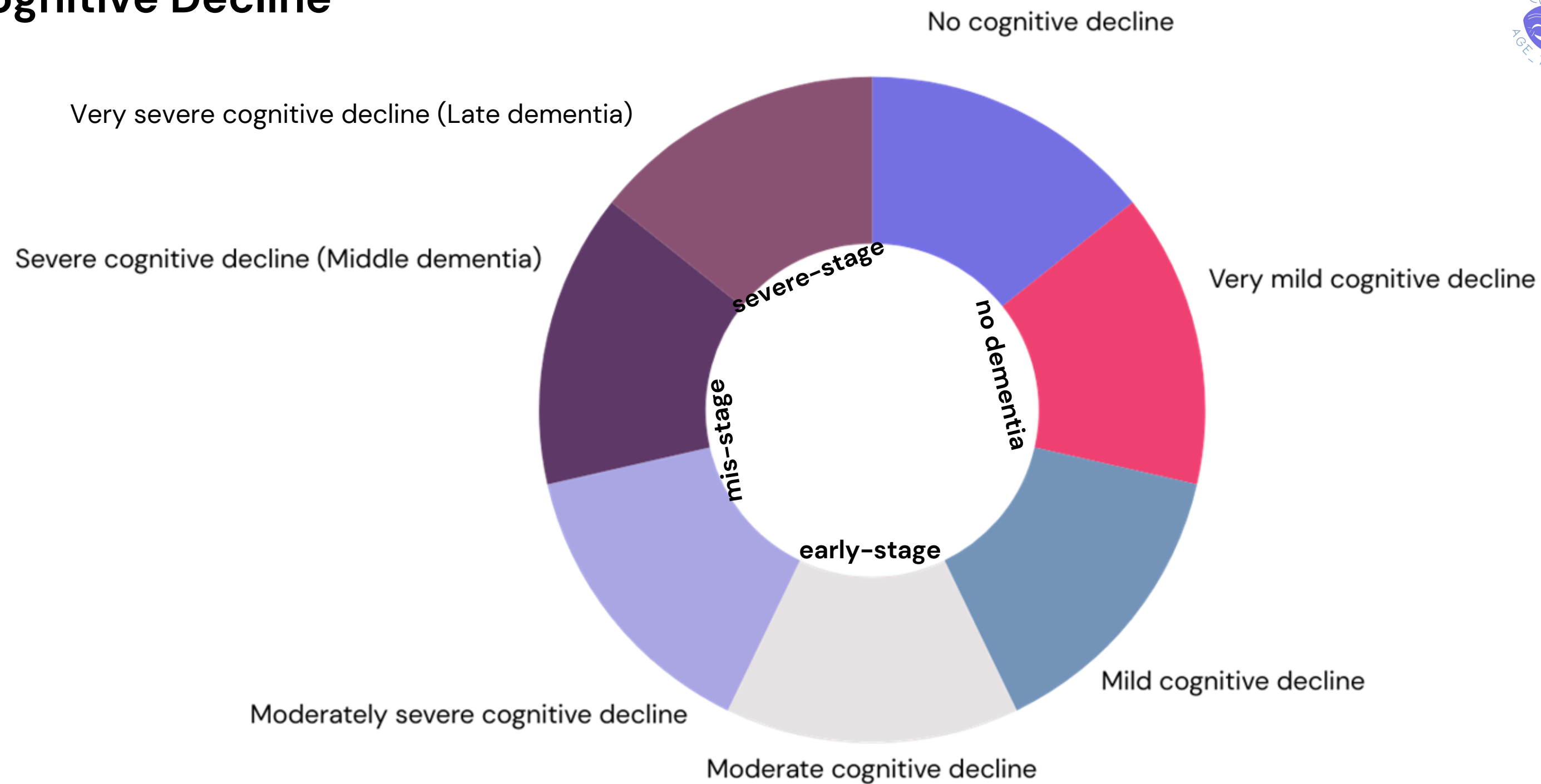
Involves gathering information from multiple sources since no single test can confirm it.

Key criteria include:

- Cognitive issues: Memory, planning, or decision-making difficulties, noted by both the patient and close contacts.
- Gradual decline: Cognitive abilities slowly worsen over time, as confirmed by medical history and family members.
- Daily function intact: Despite cognitive decline, daily activities remain manageable.
- Mild impairment on cognitive tests: Assessments like the MoCA or MMSE reveal mild cognitive impairment.
- Exclusion of dementia: Symptoms aren't severe enough to diagnose dementia or Alzheimer's disease.

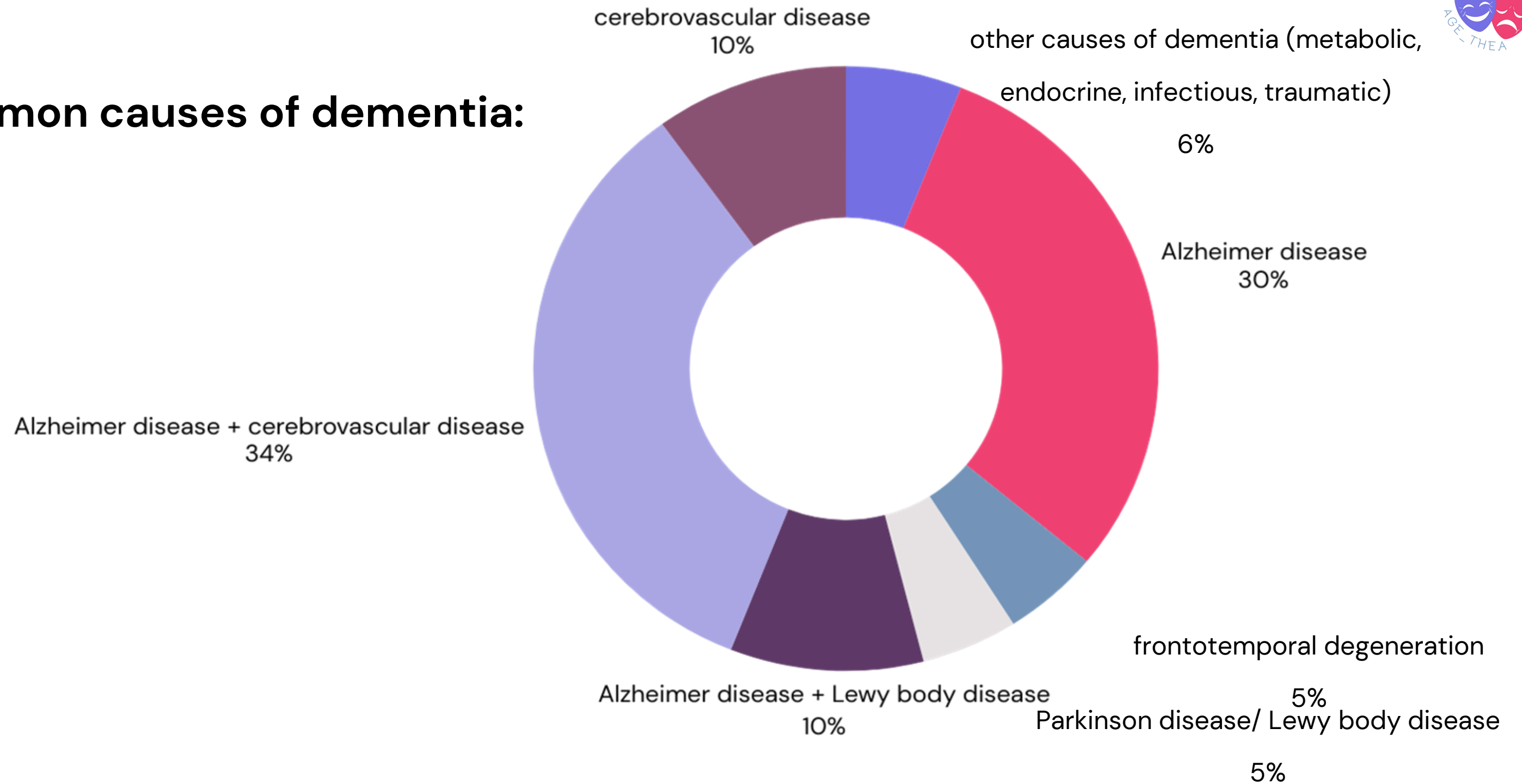


Stages of Cognitive Decline





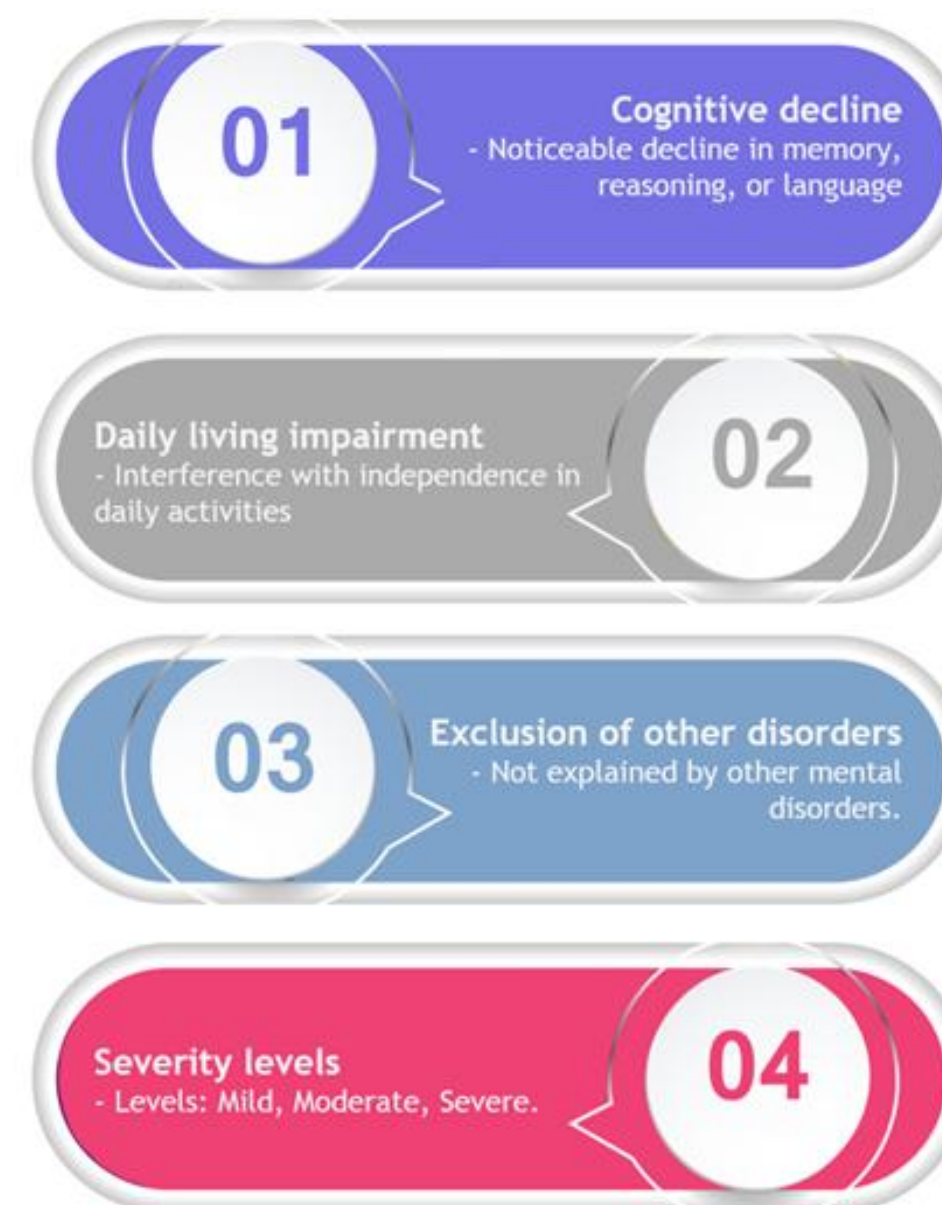
The most common causes of dementia:



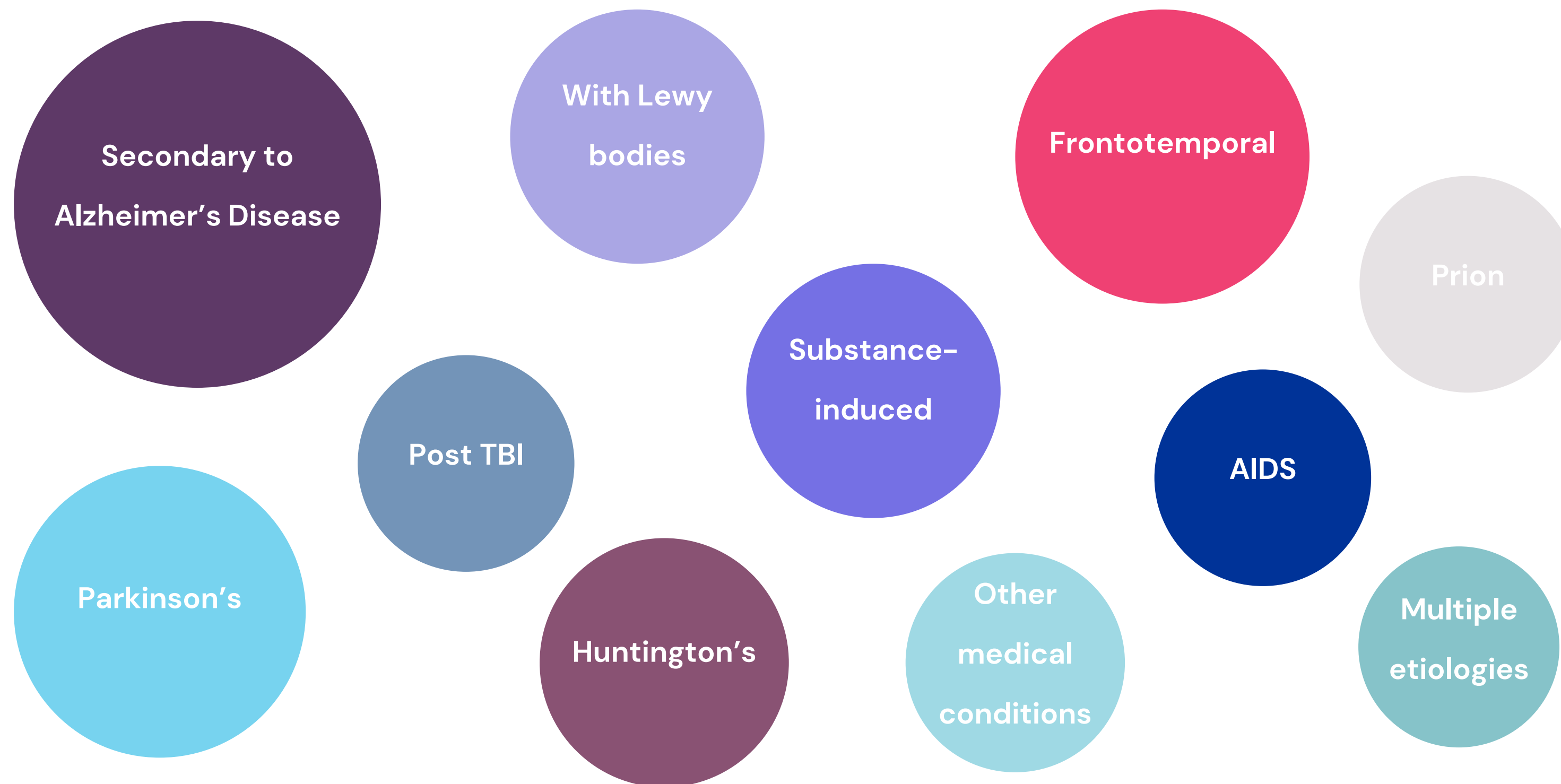


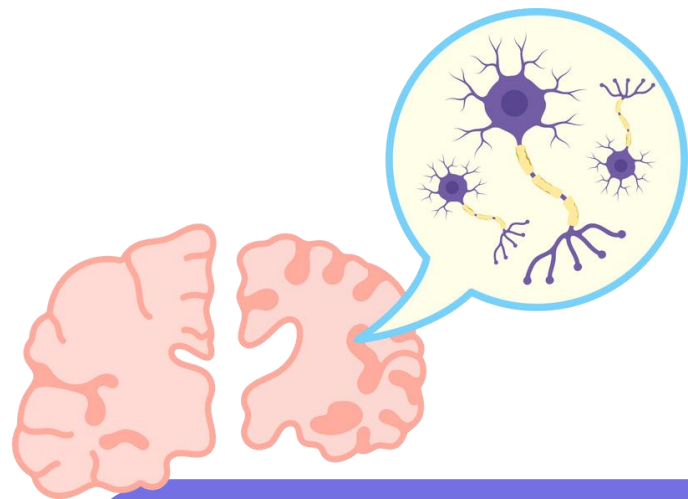
Major Neurocognitive Disorder (Dementia)

Criteria for Diagnosis:



Types of Major Neurocognitive Disorder (Dementia) according to DSM-5





Alzheimer's Disease

Pathology:

- Amyloid Plaques: Clumps of beta-amyloid protein disrupt communication between neurons.
- Neurofibrillary Tangles: Hyperphosphorylated tau protein tangles disrupt neuron transport systems.
- Neurodegeneration: Plaques and tangles lead to inflammation, cell death, and brain atrophy, primarily in the hippocampus and cerebral cortex.

Symptoms:

Early Stage: Memory loss (short-term), difficulty with problem-solving, language issues, disorientation.

Middle Stage: Increased confusion, behavioral changes, trouble recognizing people, difficulty with daily tasks.

Late Stage: Severe cognitive decline, loss of mobility, and dependence on caregivers.

Progression:

- Stages: Mild (early), moderate (middle), and severe (late).
Average duration: 4 to 20 years.
- Risk Factors: Age, family history, APOE-e4 gene, lifestyle factors (e.g., cardiovascular health).



Vascular Dementia

Pathology:

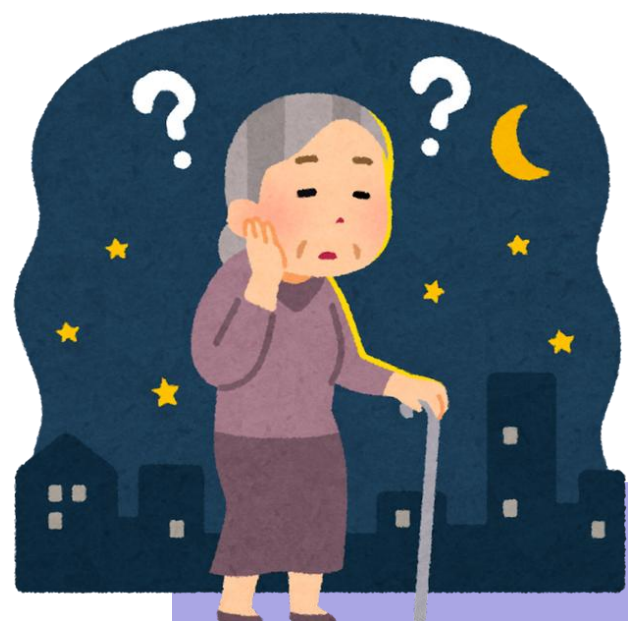
- Cerebrovascular Issues: Caused by reduced blood flow to the brain due to strokes or small vessel disease.
- Ischemic Events: Localized brain damage from poor circulation leads to cognitive impairment.
- Multiple Infarcts: Multiple small strokes over time cause cumulative brain damage.

Symptoms:

- Early Stage: Confusion, slow processing, difficulty concentrating, cognitive changes after strokes.
- Middle Stage: Fluctuating cognition, issues with planning, attention, and language.
- Late Stage: Severe memory problems, emotional changes (depression, apathy), and difficulty with daily activities.

Progression:

- Stepwise Decline: Sudden cognitive decline after strokes, unlike the gradual decline seen in Alzheimer's.
- Prevalence: Second most common dementia type, often coexists with Alzheimer's.



Lewy Body Dementia (LBD)

Pathology:

- Lewy Bodies: Clumps of alpha-synuclein protein disrupt brain function, affecting movement, cognition, and behavior.
- Neurodegeneration: Leads to brain cell death, impairing both cognitive and motor functions

Symptoms:

- Cognitive: Memory loss, fluctuating cognition, attention, and executive function difficulties.
- Motor: Bradykinesia, rigidity, tremors (similar to Parkinson's).
- Psychiatric: Visual hallucinations, delusions, mood changes (depression, anxiety).
- Sleep: REM sleep behavior disorder, where individuals act out dreams.

Progression:

- Rapid Progression: Faster decline than Alzheimer's, with an average lifespan of 5 to 8 years after diagnosis.
- Overlap with Parkinson's: Some patients may develop Parkinsonian symptoms later on.



Frontotemporal Dementia (FTD)

Pathology:

- Neurodegeneration: Affects the frontal and temporal lobes, often involving tau or TDP-43 protein abnormalities.
- Atrophy: Leads to significant brain region shrinkage, affecting personality, behavior, and language.

Symptoms:

- Behavioral Variant: Personality changes, impulsivity, loss of empathy, apathy, and neglect of social norms.
- Language Variant: Speech difficulties, trouble understanding language, and eventually loss of communication abilities.
- Physical: In later stages, motor symptoms similar to Parkinson's may develop.

Progression:

- Age of Onset: Usually between 45 and 65.
- Duration: Varies, with survival typically 3 to 10 years after diagnosis.



Diagnosis and Assessment



Diagnosis usually starts when a person or their family notices changes in memory, behavior, or thinking. A doctor will talk with the patient, do simple memory and thinking tests, and may suggest more tests if needed. Early diagnosis helps families prepare, find support, and begin care sooner.

Cognitive Screening Tests

Doctors can use short and easy tests to check memory, attention, and thinking. Here are a few common ones:

- **MMSE** – A short test that looks at memory, attention, and basic thinking skills.
- **Clock Drawing Test** – You draw a clock; it helps check thinking and planning.
- **ACE** – A longer test that looks at memory, attention, language, and other skills.

Neuroimaging

Doctors sometimes use brain scans to look at how the brain is working and to check for any visible problems.

These scans can help:

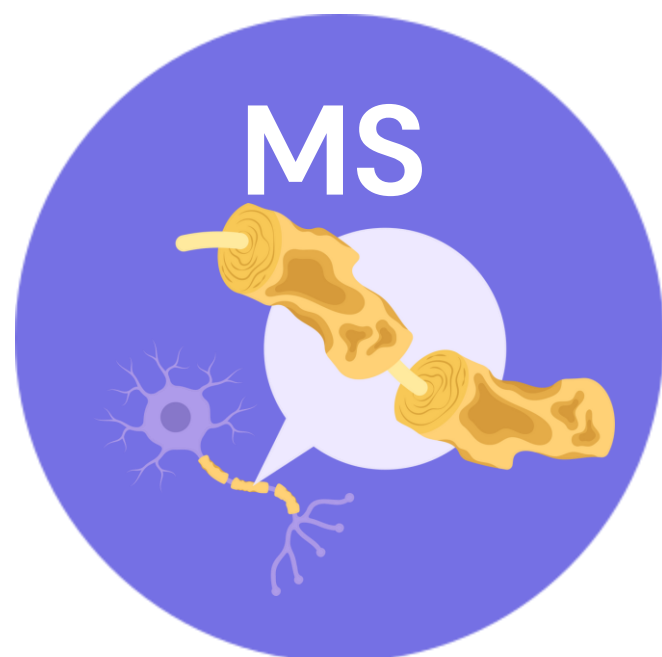
- Rule out other causes of memory or thinking changes
 - See if there are visible changes in brain structure
 - Support the diagnosis of conditions like dementia
- Imaging is one part of the full picture — it works together with memory tests and clinical evaluation.

Biomarkers

Doctors can also look at certain signs in the body — called biomarkers — that may help confirm or better understand a diagnosis. These tests can:

- Support the diagnosis of dementia
- Show if there are signs of brain changes or inflammation
- Help doctors choose the best care plan

These tests are still developing and are used together with memory tests and medical evaluation.



Multiple sclerosis



- is a chronic autoimmune disease affecting the central nervous system (CNS)
- characterized by inflammation, demyelination, and gliosis, ultimately leading to neuronal loss.
- it typically begins in young adults and often progresses to permanent disability within 10–15 years.

Relapsing–Remitting MS (70–80%): Characterized by relapses followed by periods of remission

Benign: Mild course with rare relapses

Primary Progressive (15–20%): Gradual worsening without relapses

Secondary Progressive: Starts as relapsing–remitting, then becomes progressive

Progressive–Relapsing (5%): Gradual decline with relapses

Fulminant: Severe with multiple relapses and rapid disability

There are 7
types of MS:

Clinically Isolated Syndrome: A single episode of CNS inflammation.

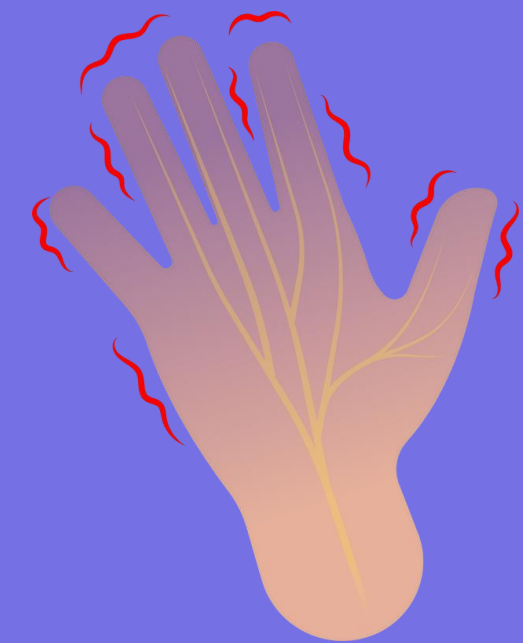


Warning Signs of Multiple Sclerosis (MS)

MS is a condition where communication between the brain and body is affected. It can cause different symptoms depending on which parts of the nervous system are involved. In some people, symptoms come and go over time. In others, symptoms get slowly worse over many months or years.

Common early signs include:

- Paresthesia
- Vision problems (often optic neuritis)
- Fatigue
- Weakness
- Gait and balance issues
- Paralysis





Parkinson's disease



- Is a neurodegenerative disorder, primarily affecting motor function
- Is the second most common neurodegenerative disease
- It typically affects older individuals but can also occur in younger patients.
- The global prevalence is estimated at 7 to 10 million, with men being 1.5 times more likely to develop PD than women.
- PD is characterized by the loss of dopamine-producing neurons in the substantia nigra and the accumulation of Lewy Bodies, which contain abnormal proteins such as alpha-synuclein and ubiquitin.
- Age is the most significant risk factor, with onset usually between 50–60 years. Other potential risk factors include exposure to environmental toxins (e.g., solvents, metals), agricultural work, and high dietary iron intake.
- **Diagnosis is clinical**, based on symptoms like resting tremor, rigidity, bradykinesia, and postural instability, with improvement on levodopa treatment supporting the diagnosis.



Warning signs of PD

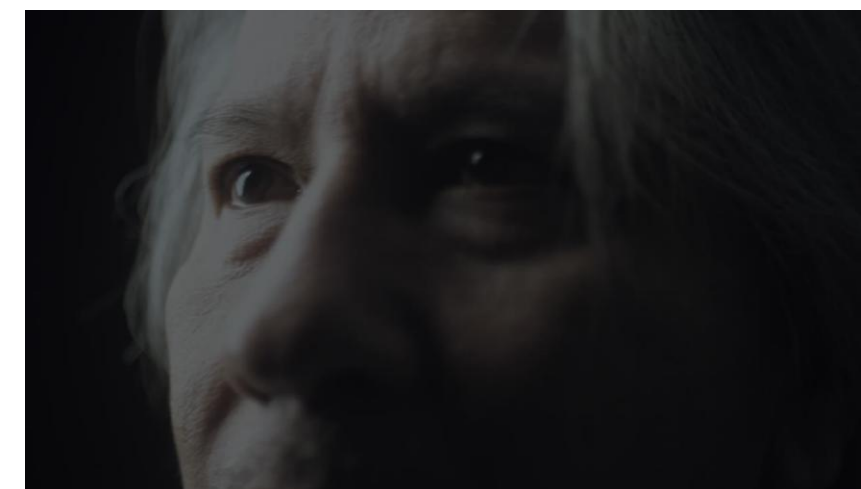
Some of the most common early signs of Parkinson's disease include:

- Resting tremor
- Micrographia (small handwriting)
- Hyposmia (loss of smell)
- Insomnia
- Impaired moving or walking due to stiffness
- Constipation
- Dizziness or fainting
- Postural deficit – stooping or hunching over





Symptoms of PD



Movement Symptoms in Parkinson's Disease

People with Parkinson's may experience:

- **Shaking** in hands or fingers when the body is at rest
- **Slow movements** that make daily tasks harder
- **Stiffness** in arms or legs, making movement feel rigid
- **Balance problems**, making it easier to trip or fall
- **Other changes**, like less facial expression, soft voice, or small, shuffling steps

Other Common Symptoms in Parkinson's:

Parkinson's can affect more than just movement. Many people also experience:

- **Mood Disorders:** Depression, anxiety, apathy, and sleep disturbances affect most patients
- **Cognitive Changes:** Dementia
- **Problems with digestion, sleep**, or going to the bathroom
- **Changes in senses** – like loss of smell or skin problems



The evolution of PD

Parkinson's disease (PD) progresses through distinct stages over time, starting well before motor symptoms appear:

Stages of PD Progression:

1. Preclinical Stage:

Neurodegeneration occurs in the substantia nigra without any clinical signs.

2. Prodromal Stage:

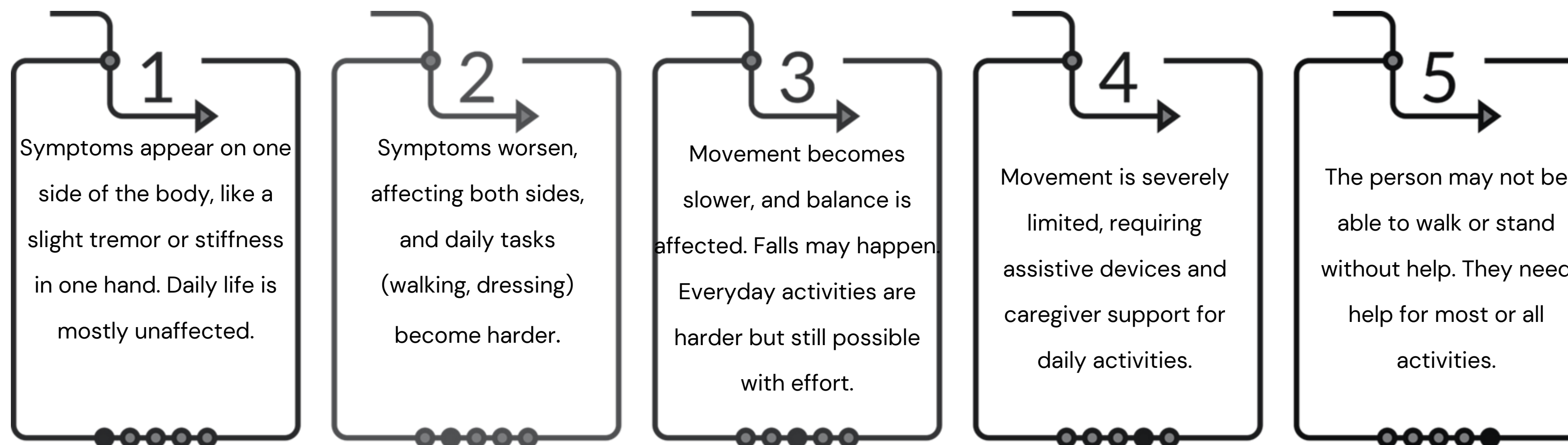
Lasts over 10 years, characterized by non-motor symptoms like REM sleep behavior disorder, constipation, olfactory loss, and depression.

3. Clinical Stage:

Motor symptoms like tremors, rigidity, and bradykinesia emerge once 40–60% of dopaminergic neurons are lost.



Stages of Symptomatic PD



The progression of PD involves a gradual worsening of both motor and non-motor symptoms, significantly impacting daily living and requiring increasing levels of care.



References

1. Khan, H. T. (2019). Population ageing in a globalized world: Risks and dilemmas?. *Journal of evaluation in clinical practice*, 25(5), 754–760.
2. Leifer, B. P. (2003). Early diagnosis of Alzheimer's disease: clinical and economic benefits. **Journal of the American Geriatrics Society*, 51*(5s2), S281–S288.
3. Kiely, K. M., Brady, B., & Byles, J. (2019). Gender, mental health and ageing. *Maturitas*, 129, 76–84.
4. Segal, D. L., Qualls, S. H., & Smyer, M. A. (2018). *Aging and mental health*. John Wiley & Sons.
5. Leigh-Hunt, N., Bagguley, D., Bash, K., Turner, V., Turnbull, S., Valtorta, N., & Caan, W. (2017). An overview of systematic reviews on the public health consequences of social isolation and loneliness. *Public health*, 152, 157–171.
6. Lo, R. Y. (2017). The borderland between normal aging and dementia. **Tzu Chi Medical Journal*, 29*(2), 65–71.
7. Harada, C. N., Love, M. C. N., & Triebel, K. (2013). Normal cognitive aging. *Clinics in geriatric medicine*, 29(4), 737.
8. Rossini, P. M., Rossi, S., Babiloni, C., & Polich, J. (2007). Clinical neurophysiology of aging brain: from normal aging to neurodegeneration. *Progress in neurobiology*, 83(6), 375–400.
9. Anderson, N. D. (2019). State of the science on mild cognitive impairment (MCI). *CNS spectrums*, 24(1), 78–87.
10. Monastero, R., Mangialasche, F., Camarda, C., Ercolani, S., & Camarda, R. (2009). A systematic review of neuropsychiatric symptoms in mild cognitive impairment. *Journal of Alzheimer's disease*, 18(1), 11–30.
11. Reisberg, B., Jamil, I. A., Khan, S., Monteiro, I., Torossian, C., Ferris, S., ... & Wegiel, J. (2010). Staging dementia. **Principles and Practice of Geriatric Psychiatry**, 162–169.
12. James, B. D., & Bennett, D. A. (2019). Causes and patterns of dementia: an update in the era of redefining Alzheimer's disease. *Annual review of public health*, 40(1), 65–84.
13. American Psychiatric Association. (2013). **Diagnostic and statistical manual of mental disorders** (5th ed.).
14. James, B. D., & Bennett, D. A. (2019). Causes and patterns of dementia: an update in the era of redefining Alzheimer's disease. *Annual review of public health*, 40(1), 65–84.
15. Arvanitakis, Z., Shah, R. C., & Bennett, D. A. (2019). Diagnosis and management of dementia. *Jama*, 322(16), 1589–1599.
- 16 Fymat, A. L. (2018). Dementia: A review. *J Clin Psychiatr Neurosci*, 1(3), 27–34



17. Yousuf, R. M., Fauzi, A. R. M., Wai, K. T., Amran, M., Akter, S. F. U., & Ramli, M. (2010). Potentially reversible causes of dementia. *International Journal of Collaborative Research on Internal Medicine & Public Health*, 2(8), 258.
18. Perry-Young, L., Owen, G., Kelly, S., & Owens, C. (2018). How people come to recognise a problem and seek medical help for a person showing early signs of dementia: A systematic review and meta-ethnography. *Dementia*, 17(1), 34–60.
19. Robinson, L., Tang, E., & Taylor, J. P. (2015). Dementia: timely diagnosis and early intervention. *Bmj*, 350.
20. Blennow, K., & Zetterberg, H. (2018). Biomarkers for Alzheimer's disease: current status and prospects for the future. *Journal of Internal Medicine*, 284*(6), 643–663.
21. Glenn, J. M., Bryk, K., Myers, J. R., Anderson, J., Onguchi, K., McFarlane, J., & Ozaki, S. (2023). The efficacy and practicality of the Neurotrack Cognitive Battery assessment for utilization in clinical settings for the identification of cognitive decline in an older Japanese population. *Frontiers in Aging Neuroscience*, 15*, 1206481.
22. Sheehan, B. (2012). Assessment scales in dementia. *Therapeutic advances in neurological disorders*, 5(6), 349–358.
23. Vaz, M., & Silvestre, S. (2020). Alzheimer's disease: Recent treatment strategies. *European Journal of Pharmacology*, 887*, 173554.
24. Livingston, G., Huntley, J., Liu, K. Y., Costafreda, S. G., Selbæk, G., Alladi, S., ... & Mukadam, N. (2024). Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission. *The Lancet*, 404*(10452), 572–628.
25. Ajdacic-Gross, V., Steinemann, N., Horváth, G., Rodgers, S., Kaufmann, M., Xu, Y., ... & Wyl, V. V. (2021). Onset symptom clusters in multiple sclerosis: characteristics, comorbidities, and risk factors. *Frontiers in Neurology*, 12*, 693440.
26. Noyes, K., & Weinstock-Guttman, B. (2013). Impact of diagnosis and early treatment on the course of multiple sclerosis. *American Journal of Managed Care*, 19*(17 Suppl), s321–31.
27. University of California, San Francisco MS-EPIC Team, Cree, B. A., Gourraud, P. A., Oksenberg, J. R., Bevan, C., Crabtree-Hartman, E., ... & Hauser, S. L. (2016). Long-term evolution of multiple sclerosis disability in the treatment era. *Annals of Neurology*, 80*(4), 499–510.
28. Poewe, W., Seppi, K., Tanner, C. M., Halliday, G. M., Brundin, P., Volkman, J., Schrag, A.-E., & Lang, A. E. (2017). Parkinson disease. *Nature Reviews Disease Primers*, 3*, 17013.
29. Noyce, A. J., Lees, A. J., & Schrag, A. E. (2016). The prediagnostic phase of Parkinson's disease. *Journal of Neurology, Neurosurgery & Psychiatry*, 87*(8), 871–878.
30. MacPhee, G., & Stewart, D. (2001). Parkinson's disease. *Reviews in Clinical Gerontology*, 11*, 33–49.
31. Jankovic, J., Hurtig, H., & Dashe, J. (2014). Etiology and pathogenesis of Parkinson disease. *UpToDate*. Retrieved from <http://www.uptodate.com/home/index.html>.
32. Beitz, J. M. (2013). Skin and wound issues in patients with Parkinson's disease: an overview of common disorders. *Ostomy/Wound Management*, 59*(6), 26–36.

