Cognitive Changes in Parkinson's Disease

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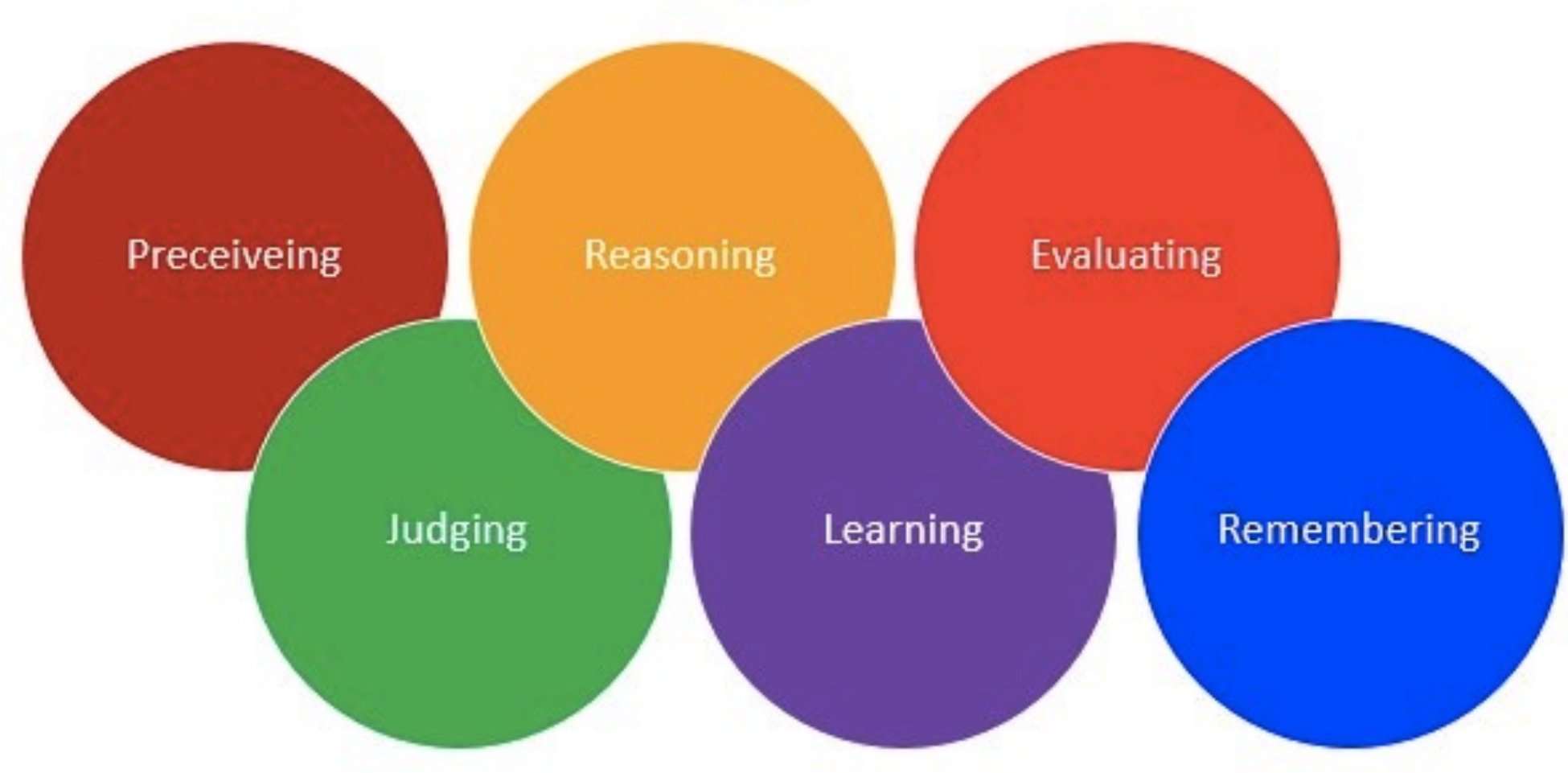
Outline

- Introduction to cognition
- Understanding age-related vs. non-age related changes
- Clinical approach for dementia evaluation
- Parkinson's disease dementia
- General brain health guidelines

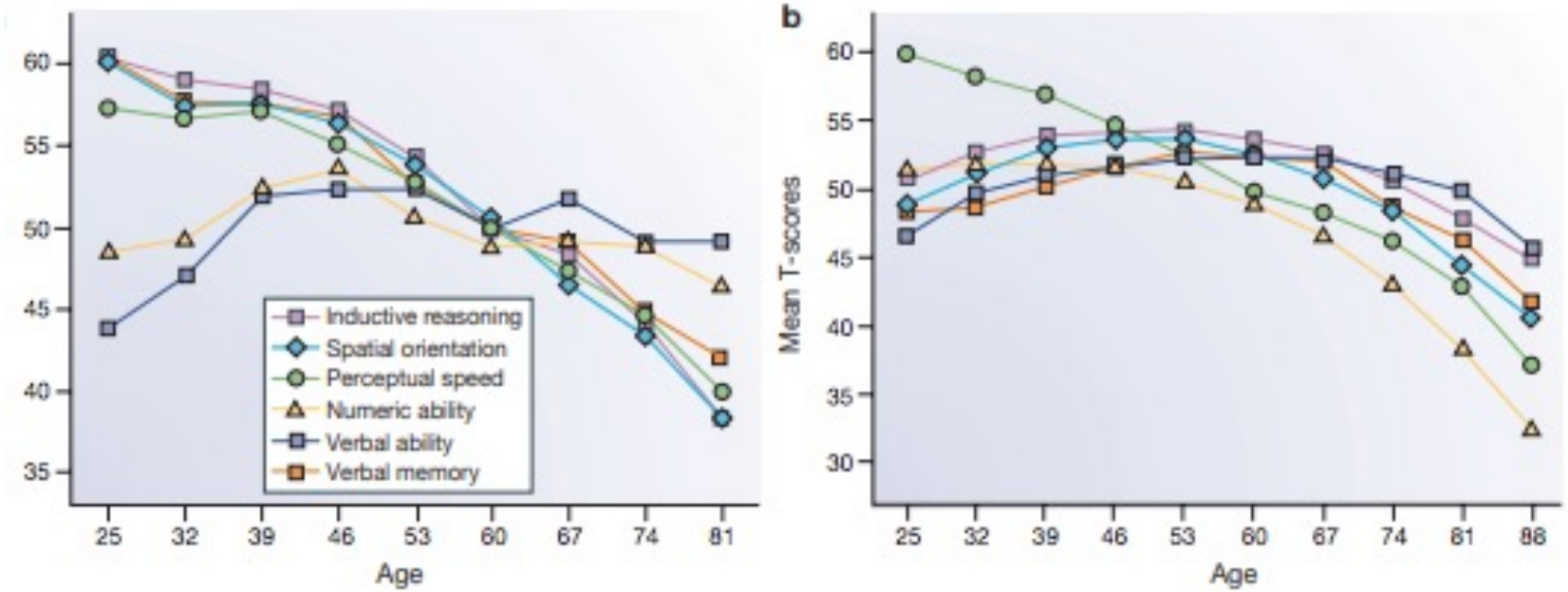
Cognition



- https://thepeakperformancecenter.com/

Age-related cognitive changes

- Normal changes are seen as early as age 30 with declines in processing speed.
- Most changes begin around age 70.
- Normal cognitive aging should NOT affect performance in activities of daily living.



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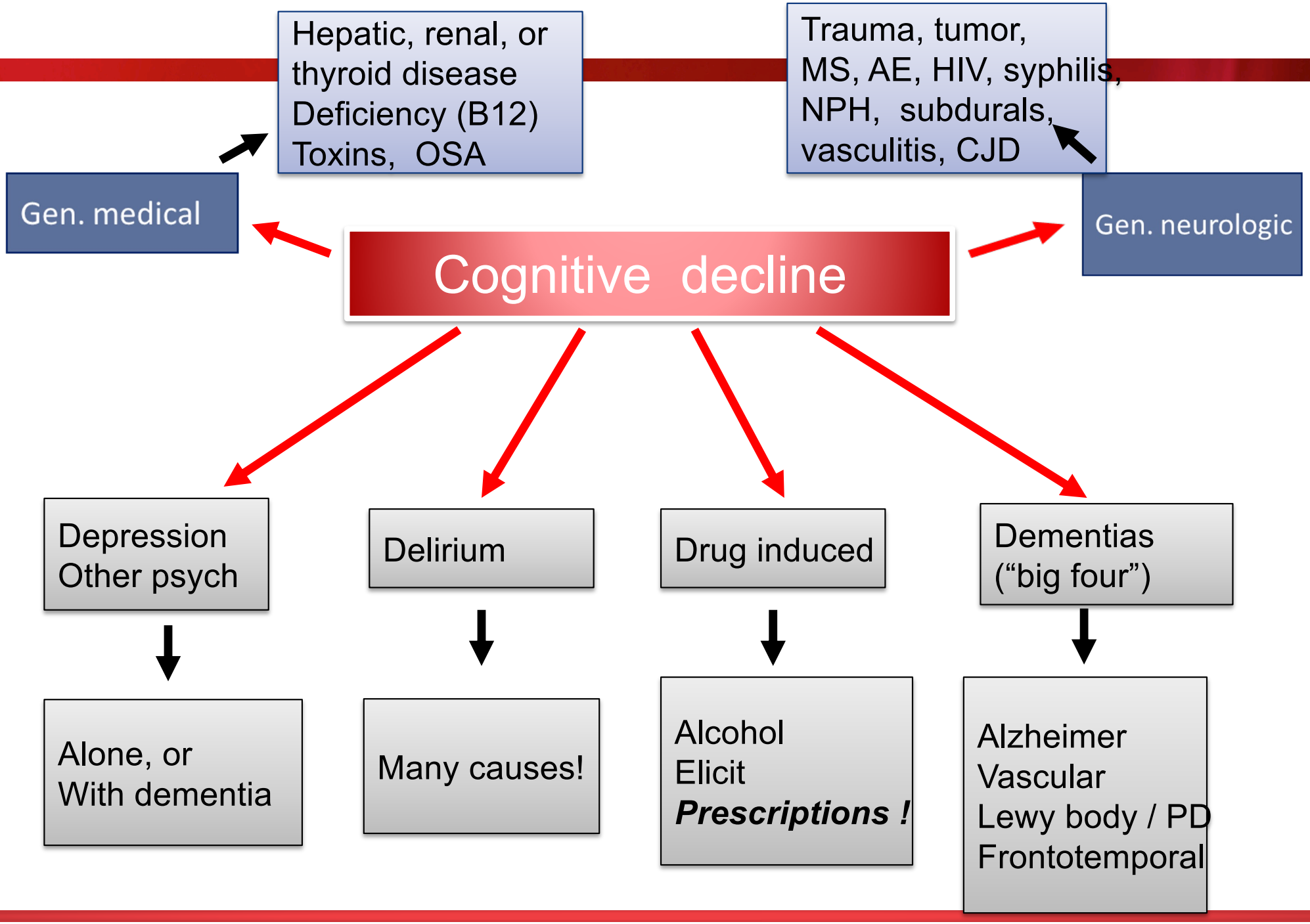
Hepatic, renal, or thyroid disease
Deficiency (B12)
Toxins, OSA
Trauma, tumor, MS, AE, HIV, syphilis, NPH, subdurals, vasculitis, CJD
Gen. medical
Gen. neurologic
Cognitive decline
Depression
Other psych
Delirium
Drug induced
Dementias ("big four")
Alone, or
With dementia
Many causes!
Alcohol
Elicit
Prescriptions !
Alzheimer
Vascular
Lewy body / PD
Frontotemporal

Mild cognitive impairment

- Cognitive decline abnormal for age and education but does not interfere with function and activities
- “At risk” state to develop a degenerative dementia
- When memory loss predominates, termed Amnestic MCI. This has ~15% per year of conversion to AD.

What Is Dementia?

- Impairment in intellectual function affecting more than one cognitive domains
- Interferes with social or occupational function
- Decline from a previous level
- Not explained by delirium or major psychiatric disease

Clinical approach for dementia evaluation

- Clinical history
- Patient demographics
- General medical history
- Family and social history
- Medications
- Presenting symptoms
- Course of illness
- Neuropsychiatric symptoms
- Sleep-related symptoms
- Functional capacity
- Examination

Parkinson's disease dementia:

- Parkinson's disease is a fairly common neurological disorder. It affects about 2% of those > 65 years.
- Cognitive dysfunction common in Parkinson's disease (PD) and exists on a continuum of severity. Prevalence increases with the duration of the movement disorder.
- PD can coexist with other common causes of dementia, such as Alzheimer's disease (AD) and vascular dementia.
- Cumulative incidence rates of over 80% have been reported in patients followed for >20 years after onset of PD (Aarsland D et al, 2008) (Morris JG et al, 2008).

Clinical features:

Cognitive impairment:

- Heterogeneous cognitive profile is different from Alzheimer's.
- General pattern of executive dysfunction, impaired visuospatial function with less prominent memory deficit and relatively preserved language function.
- Memory deficits less prominent than in AD. Aphasia, apraxia and severe memory loss are more common in AD and usually absent in PDD.

Neuropsychiatric symptoms:

- Visual hallucinations, delusions
- PD patients are subject to depression, anxiety and sleep disorders (RBD)

Management of dementia:

Non-pharmacologic interventions:

- Support the patient
- Support the caregiver

Pharmacologic interventions:

- Treatment of symptoms

Support the patient:

- Monitor any chronic illnesses
- Recognize and gain prompt treatment for infections
- Medications
- Adequate sleep
- A safe environment must be assured: guns, driving…etc.
- Provide enjoyable activities
- Functional capacity
- Identification bracelets

ADLs Tips:

Dressing:

- Layout clothes, allow ample time, limit choices

Getting to the bathroom:

- Establish a routine, simplify clothing, limit fluids in the evening.

Bathing:

- Build on past routine, privacy, adequate lighting.

Eating:

- Provide meals in a quiet and uncluttered place, pleasurable experience, independence

Sleeping:

- Reassure, speak softly, safe environment

Support the caregiver:

- Emotional support
- Guidance in decision making
- Education about the disease
- Identifying resources available in the community

Pharmacologic interventions:

- The treatment of PDD is symptomatic. No therapies to modify course or influence prognosis.

Cholinesterase inhibitors:

- Rivastigmine (Exelon®) (FDA approved in 2006)
- Other cholinesterase inhibitors: Donepezil and galantamine

NMDA receptor antagonist:

- Memantine has reported efficacy in moderate to severe AD, it could help in DLB and PDD.

Psychosis:

- Stop offending medication.
- Rule out precipitating factors like dehydration, lack of sleep or infections.
- Pimavanserin is an atypical antipsychotic approved for PD related psychosis.
- Quetiapine and clozapine can be tried in lower doses.

General brain health guidelines:

- Ensure other medical conditions are well controlled (e.g., high blood pressure, high cholesterol, diabetes, sleep apnea, etc.)
- Do not smoke or chew tobacco
- Address any sensory deficits (e.g., eyeglasses, hearing aids)
- Use a weekly pill box
- Eat a heart healthy diet (e.g., lots of fruits and vegetables, low fat/cholesterol)
- Exercise 30 minutes at least 4x per week at an intensity that would make it difficult to converse with someone
- Get at least 7 hours of quality sleep per night
- Keep yourself mentally active daily by reading, playing cards, doing word searches, puzzles, etc.
- Stay socially active by being part of a group or organization

Living with dementia

1. Agree, never argue
2. Divert, never reason
3. Distract, never shame
4. Reassure, never lecture
5. Reminisce, never say “remember”
6. Repeat, never say “I told you”
7. Do what they can do, never say “you can’t”
8. Ask, never demand
9. Encourage, never condescend
10. Reinforce, never force

https://guardianangelcare.net/2019/07/15/10-tips-living-dementia/

https://www.carolinafep.com/blog/alzheimer-s-caregivers-you-are-not-alone-.cfm

Help is available

Michael J. Fox Foundation for Parkinson's Research:

- Website offers information for people living with Parkinson's disease and research updates

Parkinson's Foundation:

- Is a nonprofit organization providing information and resources for diagnosed individuals, families and health professionals. Call the Parkinson's Foundation at 800.473.4636

The Alzheimer's Association:

- Can help you learn more about Alzheimer's disease and other dementias, and help you find local support services. Call 24/7 Helpline at 800.272.3900

Summary:

- The risk of dementia in patients with PD increases with age of onset, age of patient, severity of illness and duration.
- Cognitive impairment in PD exists on a continuum of severity.
- Non-pharmacologic interventions can help addressing many symptoms.
- It is very important to support both patients and caregivers.
- Staying physically and mentally active plays a key role in care of dementia

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Thank you!


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