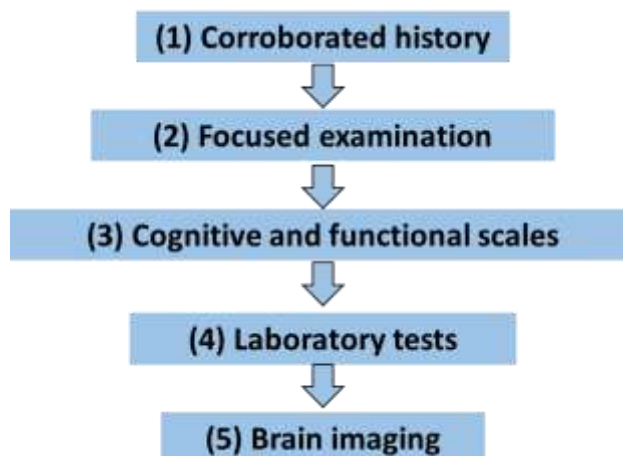


Adjourning Alzheimer's

The 5-Step Alzheimer's Approach (Day 36)

In Alzheimer's, the **cognitive dance** between hippocampus and cerebral cortex, which shapes a person's memories, is disrupted by the **long chain of pathological events** that we have discussed previously. Since there is no definitive test that can identify the Alzheimer's pathological process, a person experiencing long-term cognitive impairment can only be diagnosed after excluding alternative possibilities, followed by applying current clinical criteria for Alzheimer's.

The diagnosis of Alzheimer's is made a bit more difficult by the fact that a variety of disorders can produce **long-term cognitive impairment**, including memory loss. To tease out which disorder is responsible, a basic **5-step approach** is indicated, including: (1) a corroborated history, (2) a focused examination, (3) cognitive and functional scale scores, (4) laboratory tests, and (5) brain imaging.



The basic 5-step approach to Alzheimer's.

First, a **corroborated history** should be obtained from both the person as well as a knowledgeable informant, usually a family member. Since the history provided by a person with long-term cognitive impairment may obviously be affected by the impairment itself, corroboration is essential. The history must thoroughly cover the cognitive complaint as well as relevant comorbidities, mood disorders, nutritional deficits, alcohol consumption, and smoking.

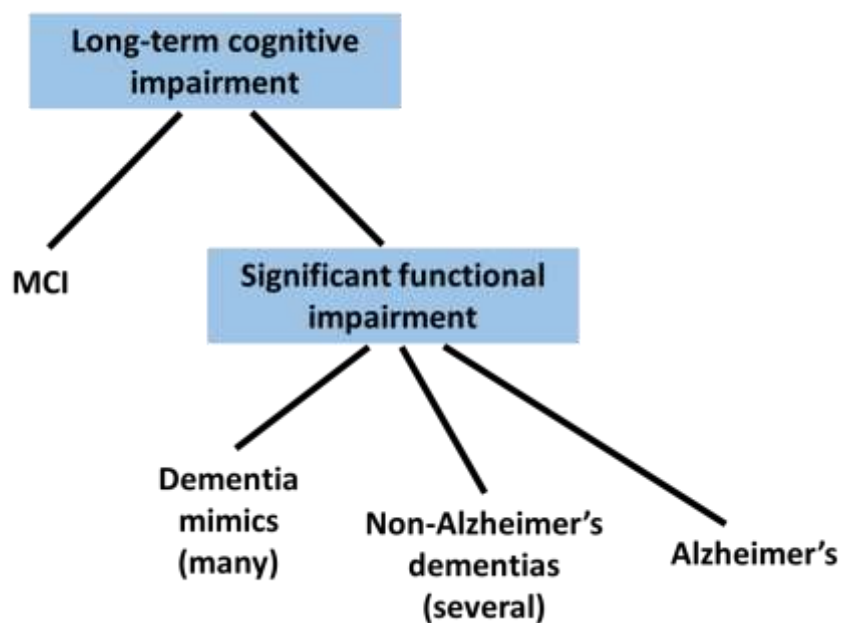
Second, a **focused examination** is useful to assess for a variety of signs. Often, a lot of information can be gathered just by looking at the person's face and general appearance, as well as how they move and walk. Their arms and legs can be checked for abnormalities in tone, strength, and coordination.

Third, **cognitive and functional scales** should be performed and scored. **Cognitive scales** usually score a person's overall cognition, including **memory, attention, concentration, language, visuospatial skills** (the ability to interpret spatial relationships between objects), and **executive function** (the ability to plan, judge, and decide); common cognitive scales include the Montreal Cognitive Assessment, commonly known as the MoCA, and the Addenbrookes Cognitive Examination, or ACE. **Functional scales** score how well a person performs regular activities of daily living, ranging from simple activities such as **eating and dressing**, to more complex activities such as **driving and shopping**, to highly complex activities such as **working and socializing**; a common functional scale is the Alzheimer's Disease Cooperative Study - Activities of Daily Living, or ADCS-ADL, scale.

Fourth, **laboratory tests** are performed to rule out various possible reasons for long-term cognitive impairment. Standard **blood tests** usually include a complete blood count, electrolytes, kidney function, liver function, thyroid function (TSH and T4), vitamins (B12, folate, and B1), HIV, and syphilis (VDRL). In exceptional situations, a more invasive **lumbar puncture** may be ordered.

Fifth and finally, **brain imaging**. In most cases, a **CT scan** is sufficient to rule out any obvious structural brain problems. Sometimes, an **MRI scan** may be required. In exceptional situations, an expensive imaging test called a **PET scan** may be performed, which measures the rate of glucose uptake and metabolism within the brain.

Using this 5-step approach, the **most common disorders** producing long-term cognitive impairment can be diagnosed - these include mild cognitive impairment (MCI), a variety of dementia mimics, a number of non-Alzheimer's dementias, and of course, Alzheimer's.



Disorders producing long-term cognitive impairment.

Alright, now that we are familiar with the basic 5-step approach, **let's apply it** as we go over the most common disorders that can produce long-term cognitive impairment. Stay tuned.

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