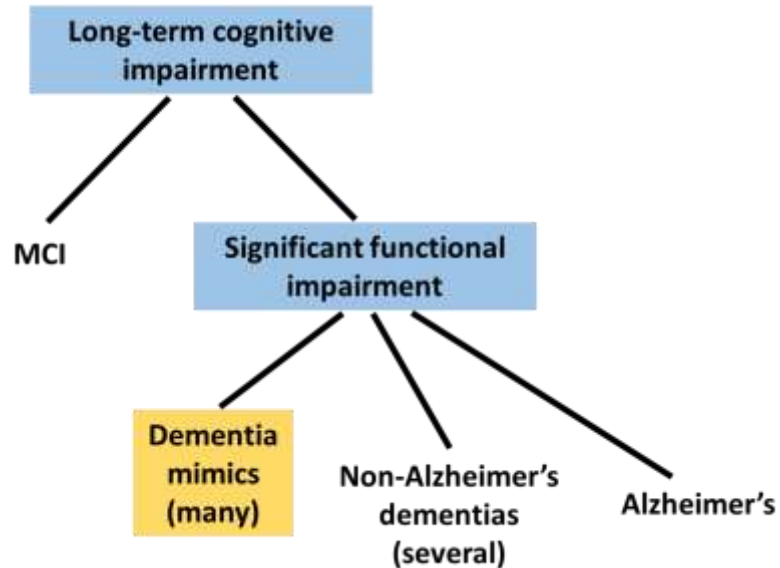


# Adjourning Alzheimer's Dementia Mimics (Day 43)



Throughout history, a surprisingly common source of dementia was **syphilis**, a brain infection due to invasion by the bacteria, *Treponema pallidum*. In syphilis, small blood vessels in the brain become abnormally thickened and block off, resulting in multiple brain infarcts and dementia. In the 1950s, the discovery of penicillin virtually eradicated syphilis in the west.

Syphilis is now classified as one of the **dementia mimics**, disorders with the capacity to display clinical signs and symptoms quite similar to those of Alzheimer's:

(1) Depression.

(2) Medication (sedative, analgesic, anxiolytic, antipsychotic, anticholinergic).

(3) Organ disorder (thyroid, liver, or kidney)

(4) Vitamin deficiency (B1, B12, E).

(5) Infection (HIV, syphilis).

(6) Brain lesion (tumour, subdural bleed, normal pressure hydrocephalus).

Dementia mimics.

Depression may be the most common dementia mimic in someone presenting with a long-term cognitive complaint. Utilizing the **5-step approach**, a diagnosis of depression can usually be made:

### (1) Corroborated history

The person has a cognitive complaint such as memory loss, and may be excessively worried about it. They may describe early morning waking and weight loss. Since the person may be unaware of their depressed mood, a corroborated history can be very helpful.



### (2) Focused examination

The person may be tearful, but otherwise the examination will be normal, with no compelling evidence of a neurological abnormality.



### (3) Cognitive and functional scales

Most cognitive and functional scales will be below normal to normal. In significant depression, the geriatric depression score (short form) will be over 8.



### (4) Laboratory tests

Blood tests will be normal. Lumbar punctures are only done in exceptional circumstances and will be normal.



### (5) Brain imaging

CT, MRI, and PET imaging will be normal.

Epidemiologically, dementia mimics comprise **about 10% of all dementia cases**. Dementia mimics are more common in people suffering from multiple medical problems, polypharmacy, alcohol excess, and nutritional deficiencies.

Crucially, some dementia mimics are **potentially reversible**; thus, many clinicians argue that in a person presenting with a long-term cognitive complaint, **extensive testing** for the full variety of mimics is warranted. If syphilis is diagnosed, for example, a simple course of penicillin might result in partial or full improvement of the dementia syndrome.

Nonetheless, the sad reality is that the number of **actually reversible** dementia mimics is not as high as many clinicians believe, with studies showing that less than 10% of all dementia mimics are partly or wholly reversible (meaning, less than 1% of all dementia cases are partly or wholly reversible).

To sum up, when a person sees their doctor with a long-term cognitive complaint such as memory loss, it is important to determine whether the cognitive impairment is due to a dementia mimic. If it is, **there is a chance that the impairment may be partly or wholly reversible**. It's a slim chance, but a slim chance may be better than no chance at all.

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#### References

- (1) Scott and Barrett. 2007. Dementia syndromes: evaluation and treatment. *Expert Rev Neurother* 7(4), 407-422.
- (2) Clarfield. 2003. The decreasing prevalence of reversible dementias: an updated meta-analysis. *Arch Intern Med* 163(18), 2219-2229.