Neurology Department

Dementia

National Neuroscience Institute
SingHealth

Understanding Dementia

Dementia describes a group of symptoms such as memory loss, impaired judgment, confusion and behavioural changes, which are severe enough to cause loss of function.

Dementia is not part of normal aging, though the elderly are more prone. Dementia occurs when the brain function gradually fails, affecting day-to-day activities.

Some causes of dementia include:

- **Alzheimer's Disease (AD)**
  AD is the most common form of dementia. Changes in the brain occur gradually. Signs include short term memory, changes in judgment, reasoning and inability to perform daily tasks.
- **Vascular Dementia (VaD)**
  VaD is linked to strokes and may be preventable. The lack of blood circulation in the brain results in localised damage to brain areas involved in attention, planning and behaviour.
- **Frontotemporal Dementia (FTD)**
  In the early stages, FTD mainly affects personality, behaviour and speech. Persons with FTD may behave rashly while their memory and sense of direction remain relatively intact.
- **Lewy Body Dementia (LBD)**
  LBD is a form of progressive dementia with noticeable changes in attention and ability to function from day to day. Persons may appear to have a lively imagination or hallucination. Signs may resemble those of Parkinson's Disease.

Young Onset Dementia (YOD)
There is an increasing number of patients with YOD. This refers to dementia patients who are below 65 years old.

The increased number could be due to rising awareness, resulting in more being diagnosed. It could also be due to the higher prevalence of vascular risk factors such as hypertension and diabetes.

Signs of Dementia

- Memory loss affecting work
- Difficulty doing daily tasks
- Problems with language
- Confusion about time/place
- Poor/decreased judgement and problems with abstract thinking
- Losing/forgetting things
- Changes in personality
- Loss of initiative
- Changes in mood behaviour

Diagnosing Dementia

1. **Interview**
   You and your caregiver will be interviewed by a neurologist and a specialist nurse to understand the problems faced.

2. **Assessments**
   A cognitive and language ability test will be conducted to help the neurologist make a diagnosis.

Other tests include:

- **Blood**
  Samples will be tested for vitamin deficiencies, thyroid disorders, and markers of infection/inflammation. Fasting is not required.

- **Brain Imaging**
  A Magnetic Resonance Imaging (MRI) or Computed Tomography (CT) scan looks for a treatable cause of dementia or the presence of atrophy (shrinkage) in the brain (Figure 1). A Positron Emission Tomography (PET) scan can also confirm the presence of amyloid and tau pathology.

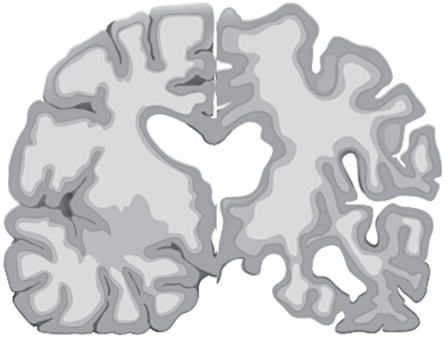


Figure 1
Left - Normal Right - Dementia
Shrinkage of the brain in Dementia patients

- **Cerebrospinal fluid (CSF) testing**
  CSF is drawn from the spine to test for markers of dementia. An appointment is needed for this outpatient procedure.

  You should come with your caregiver who can provide you support as the procedure will last a few hours.

Preventing Dementia

While there is no way to prevent dementia, it is possible to lower the risk of dementia by:

- Staying mentally active
- Being socially engaged
- Eating healthily
- Being physically active

Risk Factors

- Diabetes
- High blood pressure (Hypertension)
- High cholesterol (Hypercholesterolemia)
- Age
- Family history
- Stroke
- Parkinson's Disease

Living with Dementia

Some causes of dementia may be reversible but at present, there is no cure for the common causes such as Alzheimer's Disease and Vascular Dementia.

Medications are used to manage the signs. Appropriate care facilities, behavioural therapies, counselling, and education are available to improve care for patients and their families. For available programmes, speak to your attending doctor.

Support for Dementia

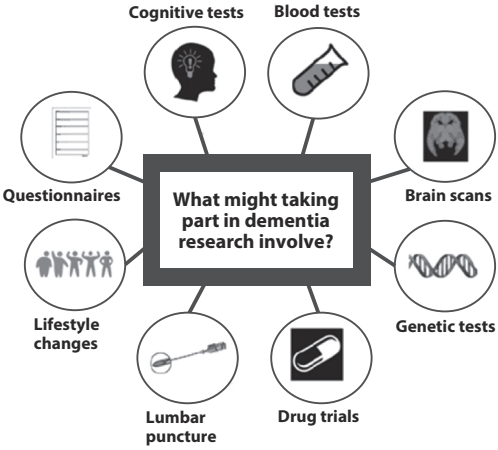
NNI Cognitive Assessment Rehabilitation (CARe) Programme

The NNI CARe Programme equips care partners with knowledge on dementia, so that they can provide support to patients. Participants share their experience and learn from the other care partners.

To join the programme, contact **mei_mei_nyu@nni.com.sg**

Research on Dementia

As there is still much to learn about dementia, NNI's research team is actively involved in clinical trials and research studies that require patient participation.



Your participation in research is important because it helps us:

- Develop a cure for dementia. Current medication manages the symptoms only.
- Understand dementia in Asians. Current knowledge is based off studies on non-Asian populations and there may be variations in the biological make-up which makes disease development and treatment different.
- Get access to samples for screening.

Speak to your doctor about NNI research programmes.

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Scan the QR code to learn more about other Neuroscience conditions

The National Neuroscience Institute operates out of two main campuses (TTSH, SGH) and four partner hospitals (CGH, KKH, KTPH, SKH).

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Brochure content serves as a guide only
Seek the advice of your doctor for more details

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