

# Cognitive (thinking) changes in Lewy body disease

Lewy body disease is a common neurodegenerative disease of ageing that is considered to be a spectrum disease. The disorders in the spectrum are: Dementia with Lewy bodies, Parkinson's disease and Parkinson's disease dementia

'Cognitive functions' are the thinking functions of the brain including language, memory, planning and attention. 'Cognitive deficits' refer to the 'dementia' component of Lewy body disease. Dementia is defined as: a progressive cognitive decline of sufficient magnitude to interfere with normal social or occupational function, or with usual daily activities. A dementia occurs when areas and networks of the brain that we rely on to interact, think, perceive and plan are affected by the disease process.

The common cognitive deficits seen in people with Lewy body disease are associated with:

## Executive function

If impaired this can affect a person's ability to be logical and flexible, to make judgements and decisions, and to plan, organise and carry out usual day to day activities.

## Attention

If impaired this can affect a person's ability to be alert and reactive to new or changing circumstances, to concentrate and to multi-task. It may make it difficult to cope in noisy environments.

## Visuospatial ability

If impaired this can affect a person's ability to perceive depth and space, judge distances and successfully navigate the environment. This increases the risk of falls. They may also have problems seeing food on the plate or mending something that is broken.

## Memory

Working memory is the memory used to process information from moment to moment. If impaired, thought processes and reaction times may be slowed. People may appear to have not heard or take a long time to answer. They can also appear over anxious or compulsive about routines or changes to routine.

Implicit memory is the memory or automatic responses associated with the habits and skills acquired over a lifetime. Many skills rely on integrated responses from numerous brain pathways. It may be that a habit is not forgotten, but its execution is compromised by the disease.

Of greater significance is that explicit memory (memory for events, experience and knowledge) is often spared. People with Lewy body disease may be able to encode new memories, recall long-term memories and recognise and relate to family and friends well into the course of their illness. As opposed to the memory loss seen in Alzheimer's disease, many people with Lewy body disease retain these abilities until they die. On 'good days' they can have insight into their situation and the choices available to them.

## Fluctuating cognition

For reasons not yet fully understood, people with Lewy body disease can have 'good days' and 'bad days'. The 'days' can be literally days or only hours. They are not related to medication regimes.

On the next page are some tips for managing cognitive problems.

## Managing cognitive deficits

A person with dementia associated with any of the Lewy body disorders is often described as being in a muddle or not quite right. Early in the course of the disease a partner or colleague may notice that papers are being moved around a desk or tasks previously completed easily are left unfinished.

- Recognise significant changes in behaviour. Suggest a medical assessment.
- Encourage the person to ask for assistance and develop strategies to ensure important tasks are completed.
- Ensure legal documents such as powers of attorney and wills are in place.

An early indication that a person has attentional, visuospatial and executive function problems is often a lack of confidence when driving. Passengers comment that roundabouts and busy intersections pose significant challenges.

- If the person wishes to cease driving accept their decision, rather than suggest that they are OK.
- If, as the passenger, you have concerns discuss it openly with your GP and ask for a driving assessment.

Shopping, outings and social functions, particularly when there are crowds or the venue is noisy, can be disturbing and result in the person becoming agitated or withdrawn.

- Learn to recognise the 'good days' and be flexible with arrangements.
- Organise meals with one or two friends or family rather than a large number.
- Select outings where you have some control over noise levels and crowd control.
- Attend important family celebrations for part of the time rather than not go at all. Go to other people's places so you can leave early or organise respite for part of the day.

Partners may perceive that the person has become disinterested in the relationship and more self-absorbed. There may be changes in both conversation and non-verbal communication or gestures.

- Be patient and give the person plenty of time to interpret and respond.
- Irony and non-verbal gestures such as raised eyebrows and shoulder shrugs are difficult to understand – speak directly.
- Involve the person in decision making and life choices.

A person may appear to lose interest in pursuing hobbies and activities that require hand-eye coordination. Rather than being disinterested, this may be because of visuospatial deficits or the ability to plan and execute the task.

- Accept the loss and do not put unrealistic expectations on the person.
- Choose other activities that are achievable and that involve you or a friend.
- Discuss news, current affairs and the local gossip, even if it appears to be a one way conversation.

**Resources:**

Parkinson's Australia is the peak body for advocacy and support of people with Parkinson's disease. Visit [parkinsons.org.au](http://parkinsons.org.au) or call **1800 644 189**.

US Lewy Body Dementia Association visit [lbda.org](http://lbda.org)

UK Lewy Body Society visit [lewybody.co.uk](http://lewybody.co.uk)

**Further Information**

Dementia Australia offers support, information, education and counselling. Contact the National Dementia Helpline on **1800 100 500**, or visit our website at [dementia.org.au](http://dementia.org.au)



For language assistance phone the Translating and Interpreting Service on **131 450**