# Dementia with Lewy bodies

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**Overview**

Lewy body dementia (LBD) is a type of dementia that is caused by the presence of abnormal protein deposits called Lewy bodies in the brain. LBD is a progressive condition that can affect cognition, movement, behavior, and autonomic function. There are two main types of LBD: dementia with Lewy bodies (DLB) and Parkinson's disease dementia (PDD).

Dementia with Lewy bodies (DLB) is the second most common cause of neurodegenerative dementia after Alzheimer's disease, accounting for approximately 10-15% of all cases. DLB is most commonly diagnosed in individuals over the age of 60, with the incidence increasing with age. It affects both men and women equally.

Parkinson's disease dementia (PDD) is a form of LBD that occurs in individuals who have already been diagnosed with Parkinson's disease. The prevalence of PDD increases with age, affecting approximately 50-80% of individuals with Parkinson's disease who survive 10-15 years after diagnosis.

LBD can also occur in individuals with other neurodegenerative disorders, such as Alzheimer's disease and Huntington's disease. In these cases, the prevalence and incidence of LBD is not well understood and may vary depending on the specific population studied.

**Symptoms and signs**

Some common symptoms and signs of LBD include:

Cognitive impairment: LBD can cause significant cognitive impairment, including problems with memory, attention, problem-solving, and decision-making.

Movement symptoms: Movement symptoms may include tremors, muscle stiffness, slowness of movement, and difficulty with balance and coordination.

Visual hallucinations: LBD is often associated with vivid and detailed visual hallucinations, which may be frightening or upsetting for affected individuals.

Fluctuating alertness: LBD can cause fluctuations in alertness and attention, with affected individuals experiencing periods of confusion, disorientation, and even sleepiness.

Sleep disturbances: LBD can cause significant sleep disturbances, including insomnia, excessive daytime sleepiness, and rapid eye movement (REM) sleep behavior disorder.

Behavioral and mood changes: LBD can cause significant changes in behavior and mood, including depression, anxiety, agitation, apathy, and irritability.

Autonomic dysfunction: LBD can also affect autonomic function, causing symptoms such as orthostatic hypotension (low blood pressure when standing up), constipation, urinary incontinence, and sexual dysfunction.

**Diagnosis**

The diagnosis of Lewy body dementia (LBD) can be challenging because the symptoms and signs can be similar to other neurodegenerative disorders such as Alzheimer's disease and Parkinson's disease. However, there are specific diagnostic criteria that can be used to help identify LBD. The diagnostic criteria were developed by an international consortium of experts.

A diagnosis of LDB requires a progressive decline severe enough to interfere with daily functioning as well as at least two of the following:

* Fluctuating alertness and thinking function: : The presence of fluctuations in cognition, attention, and/or alertness that are unpredictable and may change within hours or days.
* Repeated visual hallucinations: The presence of well-formed and detailed visual hallucinations that are recurrent and typically involve people or animals.
* Parkinsonian symptoms: The presence of parkinsonian symptoms such as tremors, stiffness, and slowness of movement.
* REM sleep behavior disorder, in which people act out their dreams during sleep：The presence of a specific sleep disorder in which individuals act out their dreams, often with violent or physically active behaviors.

In addition to these core features, the criteria also include several supportive features that can increase the likelihood of an LBD diagnosis. These features include autonomic dysfunction, sensitivity to antipsychotic medications, and abnormalities on neuroimaging studies.

The diagnosis of LBD requires a thorough evaluation by a qualified healthcare provider, such as a neurologist or geriatrician, who has experience in the diagnosis and management of neurodegenerative disorders. The evaluation may include a physical exam, cognitive testing, imaging studies, and laboratory tests to rule out other possible causes of the symptoms. In some cases, a brain biopsy may be necessary to confirm the presence of Lewy bodies.

**Treatment**

The treatment of Lewy body dementia (LBD) is focused on managing the symptoms of the disorder and improving the quality of life for affected individuals. The treatment approach may vary depending on the subtype of LBD (dementia with Lewy bodies or Parkinson's disease dementia) and the individual's specific symptoms.

Medications: Medications such as cholinesterase inhibitors (donepezil, rivastigmine, and galantamine) can help improve cognitive function and reduce behavioral symptoms in some individuals with LBD. Parkinson's medications such as levodopa can help improve movement symptoms in individuals with Parkinson's disease dementia. However, it's important to note that medications that block dopamine (such as antipsychotics) can worsen the symptoms of LBD and should be used with caution.

Behavioral interventions: Behavioral interventions such as physical therapy, occupational therapy, and speech therapy can help improve motor function, communication, and activities of daily living.

Environmental modifications: Environmental modifications such as reducing clutter, improving lighting, and minimizing distractions can help reduce the risk of falls and improve safety.

Support for caregivers: Caregivers of individuals with LBD may benefit from education and support programs that provide information about the disorder and help with managing the challenging behaviors and symptoms.

Management of comorbidities: Individuals with LBD often have other medical conditions, such as hypertension or diabetes, which need to be managed appropriately to optimize overall health.