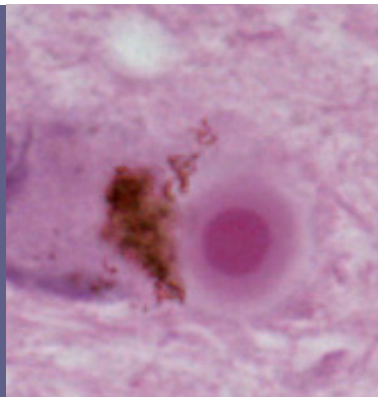




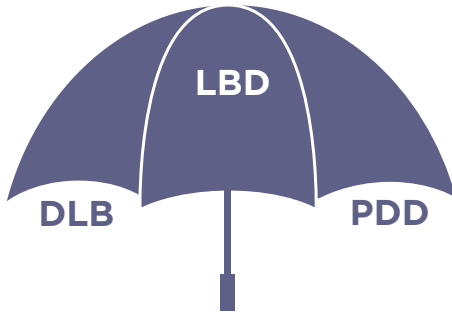
LEWY BODY DEMENTIA THE STATE OF THE SCIENCE



WHITEPAPER BRIEF

Along with the rising tide of Lewy body dementia (LBD) diagnoses and awareness, research is entering an even more unprecedented era of opportunity.

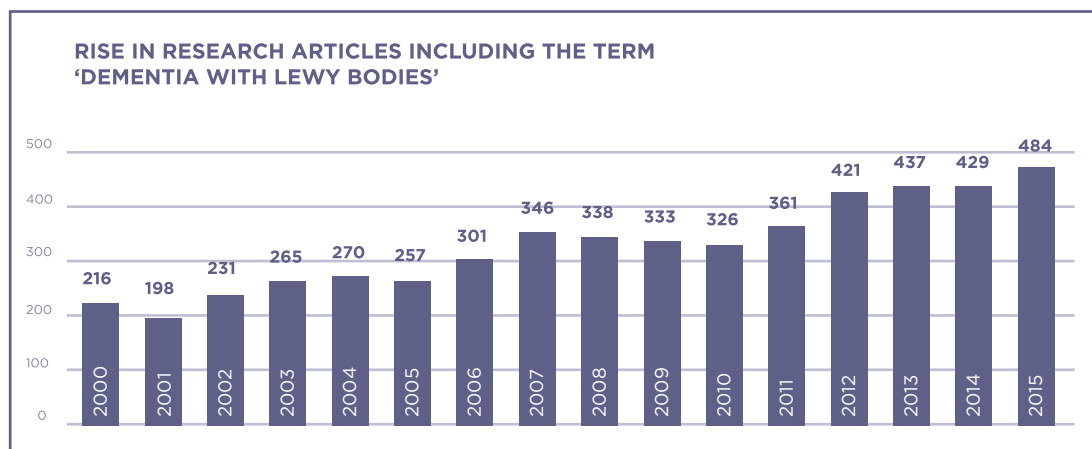
Lewy body dementia is an umbrella term for two diagnoses: “dementia with Lewy bodies” (DLB) and “Parkinson’s disease dementia” (PDD). The Lewy Body Dementia Association’s report, **Lewy Body Dementia: The State of the Science**, focuses on DLB. Dementia with Lewy bodies impairs thinking, movement, behavior, sleep and certain autonomic processes in the body, such as those controlling heart rate, blood pressure, bladder and gut.



RECENT RESEARCH GAINS

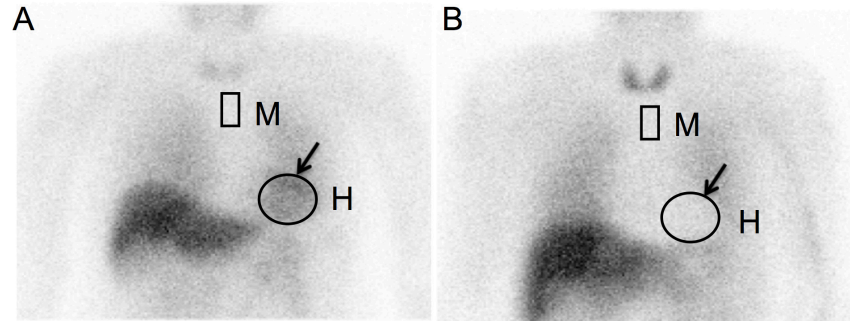
DLB research has been rising steadily over the last 10 years, bringing greater understanding of its prevalence and methods to diagnose and treat the disorder.

- The recent creation of an LBD research strategy as well as increases in LBD research funding from the National Institutes of Health are the direct result of LBD being included in the National Plan to Address Alzheimer’s Disease.
- Autopsy studies suggest that DLB accounts for 10-25% of dementia cases.
- Cutting-edge, brain imaging tests are increasingly being used in academic research settings, such as FDG-PET; SPECT dopamine transporter scan; MIBG cardiac scintigraphy.
- A number of genes that affect the risk of someone developing DLB have been identified, including SNCA, SCARB2, GBA and APOEε4.
- For the very first time, a governmental regulatory agency approved a drug for the treatment of DLB (Aricept in Japan and the Philippines).



Source: Medline (PubMed) Trend

MIBG scintigraphy scans compare a person with AD (A) to a person with DLB (B). This diagnostic technique compares the ratio of the tracer uptake into the heart (H), over the uptake in a section of chest space, the mediastinum (M). An abnormal scan indicates degeneration in the sympathetic nerve terminals in the heart, which is common in DLB but not AD.



Source: Masahito Yamada, Kanazawa University

KEY RESEARCH OBJECTIVES

Major increases in research funding and stakeholder collaboration are urgently needed to close vital gaps in our understanding of DLB. Areas for additional study include:

- **Biology** - Cellular and animal models that more closely replicate DLB as seen in humans
- **Biomarkers** - Biological tests that identify disease presence or progression
- **Symptomatic Therapies** - Safe and effective treatments developed specifically for people with DLB
- **Disease-Modifying Treatments** - Drugs that can modify the process of alpha-synuclein accumulation
- **Prevalence** - Community-based epidemiology studies
- **Health Disparities** - Understanding of how race, gender and socioeconomic factors affect risk of DLB
- **Risk Factors** - Genome-wide association studies; an understanding of how lifestyle and environment affect risk; the interaction between genes and environment
- **Study Cohorts** - Longitudinal studies that follow large groups of individuals who are at risk for DLB and those already diagnosed over time, to study changes in brain structure, function, biochemistry and symptom progression
- **Research Consortium** - A formalized network of DLB research sites, needed to answer questions that require large sample sizes
- **Data Pooling** - Harmonized research data pooled in a large, public database

Read the full version of *Lewy Body Dementia: The State of the Science* at lbda.org/StateoftheScience.



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This initiative is sponsored by an unrestricted educational grant from



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