## Cognition in Parkinson's disease and Lewy body dementia



Stanford MEDICINE

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### Why does a Movement Disorders Specialist care about 'non-motor' things like cognition?

#### "An Essay on the Shaking Palsy" James Parkinson 1817

ESSAY SHAKING PALSY.

CHAPTER I. DEFINITION-HISTORY-ILLUSTRATIVE CASES.

SHAKING PALSY, (Paralysis Agitans.) Involuntary tremulous motion, with lessened muscular power, in parts not in action and even when supported; with a propensity to bend the trunk forward, and to pass from a walking to a running pace: the senses and intellects being uninjured.

even when supported, with a propensity to bend the trunk forward, and to pass from a walking to a running pace; the senses and intellects being uninjured. Initial description of PD stated that the "senses and intellects being uninjured"

Now, PD specialists independently assess both "Motor" and "Nonmotor" symptoms

#### Non-Motor Symptoms Emerge at Different Times in the Course of PD

Loss of smell Constipation REM Behavior disorder Insomnia Sexual Problems Pain Syndromes Hypophonia Mild to Moderate Memory Problems

**Depression & Apathy** 

Anxiety

Urinary Urgency, Excessive Sweating, Excessive Salivation

Dysarthria, Dysphagia

#### Dementia

Hallucinations Severe Orthostatic Hypotension Urinary Incontinence Severe Dysphagia and Choking

Can Precede Diagnosis

Later in Disease

Earlier in Disease

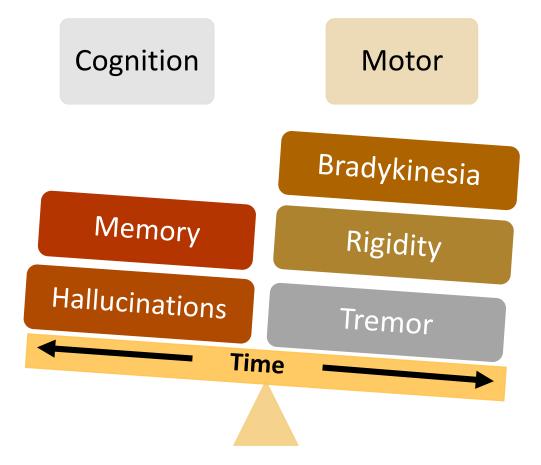
## Why are Non-Motor Symptoms so difficult to understand and treat?

- The motor symptoms are more 'obvious'
- Impact of non-motor symptoms on quality of life has only been recognized by physicians for the past 15 years
- There is much more variability in the type and severity of non-motor symptoms experienced by any single patient.
- Because of this variability non-motor symptoms are harder to study.

# Why is it important to treat Non-Motor symptoms?

- They can impact quality of life just as much as the motor symptoms
- They can actually WORSEN your motor and other nonmotor symptoms
  - Tremor can worsen when you are constipated

Memory can worsen when you do not sleep or when you are anxious



#### Lewy Body Dementia

#### Parkinson's Disease Dementia

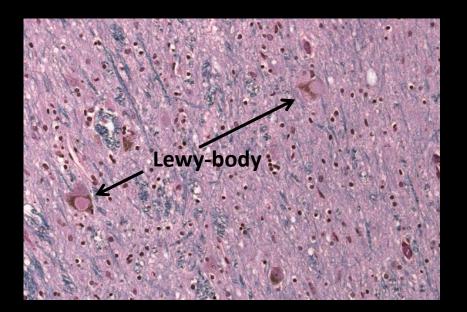
Essential Features	Dementia before or < 1 year after motor symptoms of Parkinsonism started (attention, executive, visuospatial > memory, language)	Dementia in setting of established PD (>1 year after motor symptoms of Parkinsonism started) (attention, executive, visuospatial > memory, language)
Core Features	Cognitive fluctuations Visual hallucinations Parkinsonism (at least one of slowness, stiffness, or tremor) REM sleep behavior disorder	
Associated/ Suggestive Features	Severe Neuroleptic sensitivity Postural Instability Repeated falls Syncope/ Transient Loss of Consciousness Autonomic Dysfunction Depression Hallucinations Delusions	Apathy Depression/anxiety Hallucinations Delusions Excessive daytime sleepiness
Indicative Biomarkers	Low Dopamine transporter uptake MIBG myocardial scintigraphy Sleep study confirmation REM Sleep Behavior Disorder	

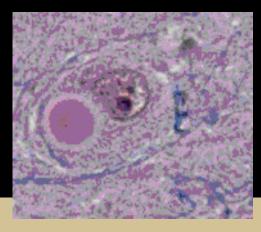
The appropriate term will depend upon the clinical situation and generic terms such as <u>Lewy Body</u> <u>Disease</u> (which includes both Parkinson's disease and Lewy Body Dementia) are often helpful.

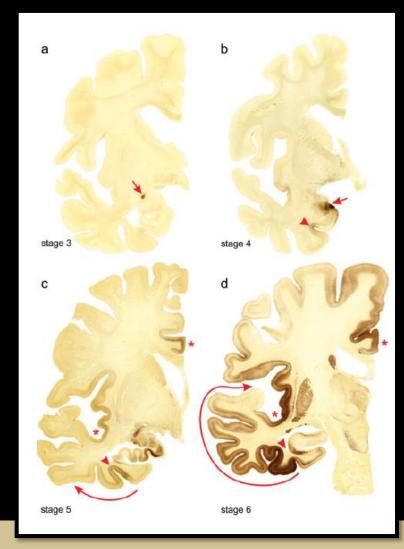


RESEARCH CENTERS OF EXCELLENCE

Lewy-body Pathology in Both PD and LBD







#### What type of mind and memory changes can be seen in a person with Lewy Body diseases? Executive Cognitive function Domains Attention and Visuospatial Working function Memory Language Memory

## **Thank You For Participating!**











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