

Parkinson's Disease: Understanding & Helping to Improve Care



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FREE WEBINAR
October 2, 2019
12:00 - 1:00 pm

Type your questions
during the webinar



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My Disclosures

Research Funding:

- NIH
- Biogen
- MJ Fox Foundation



Objectives

Participants will be able to:

- Understand prodromal Parkinson
- Explain a symptomatic medication treatment strategy
- Consider complementary therapies
- Discuss role of deep brain stimulation for PD
- Improve PD care



Prodromal PD Research Criteria

RISK MARKERS

- Male gender
- Pesticide/solvent exposure
- Lack of caffeine
- Nonsmoker
- [First degree relative &/or gene mutation](#)
- Diabetes mellitus
- Physical inactivity
- Low serum uric acid

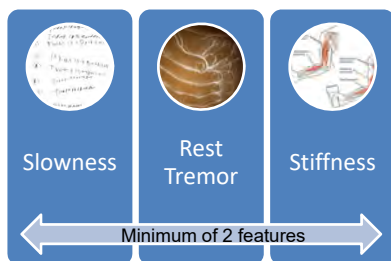
PRODROMAL MARKERS

- [REM Behavior Disorder \(RBD\)](#)
- Abnormal DaTSCAN
- [Subtle clinical features](#)
- [Loss of olfaction](#)
- Constipation
- Daytime somnolence
- Orthostatic hypotension
- Erectile dysfunction
- Urinary dysfunction
- Depression
- Cognitive changes

Heinzel et al. Mov Dis 2019 doi.org/10.1002/mds.27802



Parkinson's Disease Diagnosis

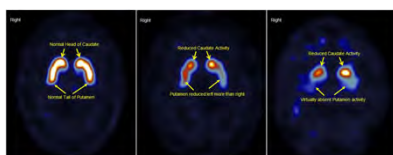


Supportive Features

- Clinical response to levodopa
- Loss of olfaction

Absence of

- Cerebellar signs
- Supranuclear palsy
- Present or recent use of dopamine blocking or depleting medication
- Cortical features - astereognosis, apraxia
- Normal dopamine scan (DaTSCAN)



Normal Abnormal Abnormal
Dopamine scan (DaTSCAN)

Red Flags

- Rapid progression
- Early falls
- Early prominent autonomic failure
- Symmetric parkinsonism
- Absence of RBD, loss of smell, constipation, anxiety, depression

Reich and Savitt 2019 doi.org/10.1016/j.mcna.2018.10.014



Rest Tremor



Rigidity



Akinesia/Bradykinesia



Postural Changes



Genetics & Other Factors

15% of PD has a genetic cause
85% is environmental +/- genetic

Some genetic mutations cause PD

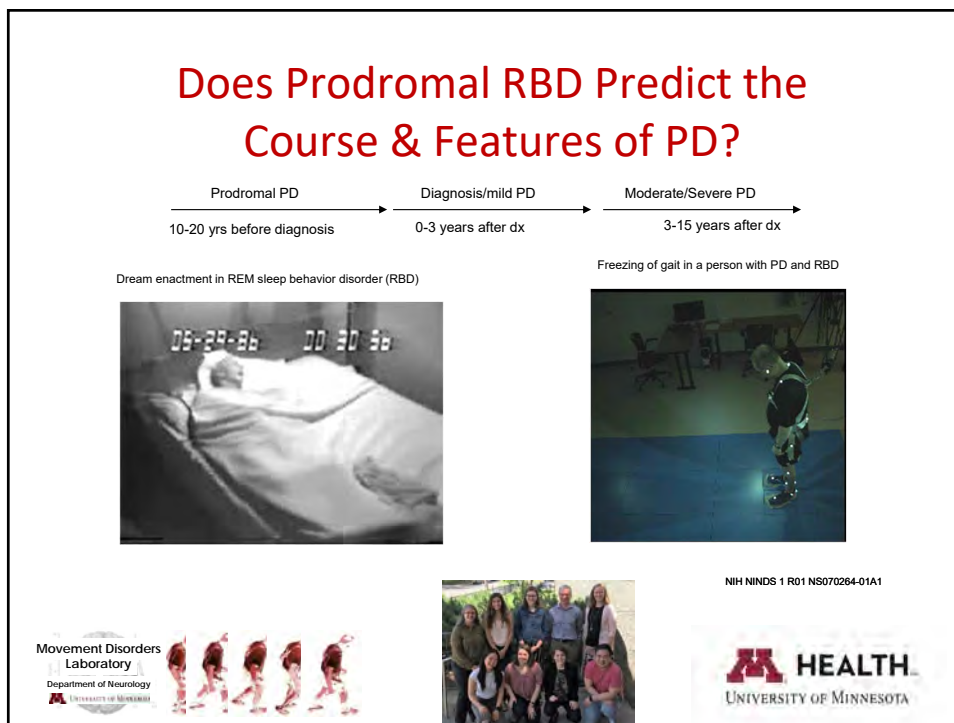
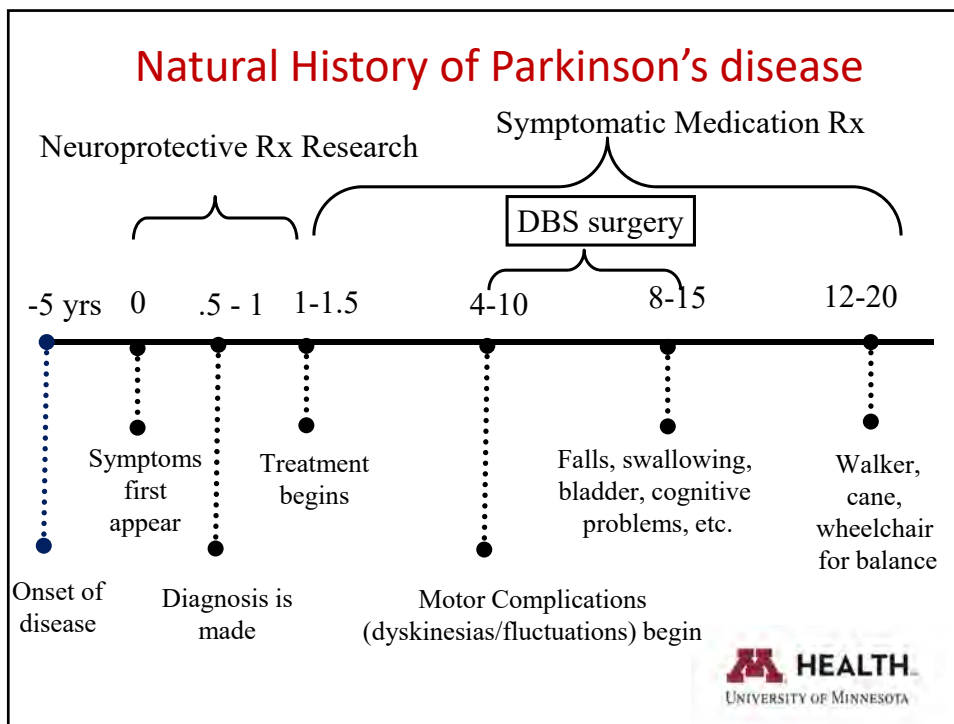
Other genetic mutations are risk factors, e.g.,

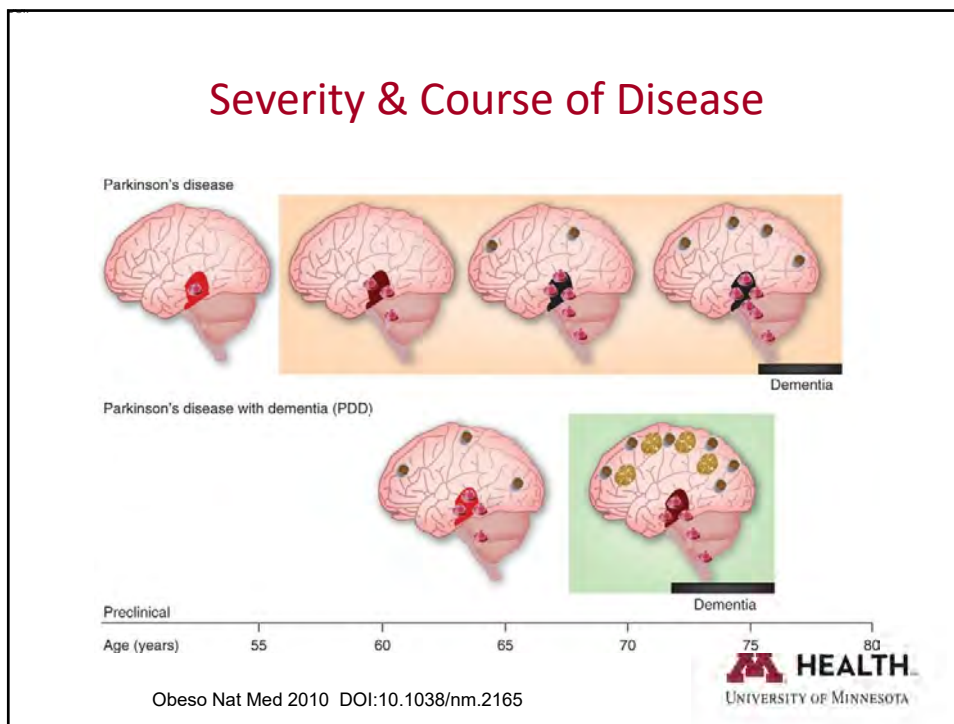
- Glucocerebrosidase (GBA) and LRRK2
- 70% of those with a LRRK2 mutation do not get PD.

PD GENERation study will determine if an individual has a genetic mutation to aid in recruitment for treatment studies focused on pathways related to that gene

23andME & Univ of Rochester (New York state)– study of 400 people w/ LRRK2 gene mutation (350 w/o PD and 50 w/ PD)







Address More than Motor Features of PD:

Clinical Review:

Review medications, response to Rx and complications, Dx

Safety Review:

Falls, injury/falls prevention, driving

Autonomic dysfunction:

Blood pressure issues:
Bladder issues:
Constipation:
Sweating
Heartburn or/and Swallowing difficulty:
Drooling

Nonpharmacological Rxs:

Physical/Speech/Occupational Therapy

Research

Education information:

Www.parkinsonmn.org
Www.healtheducation.umn.edu/parkinsons

Neurocognitive:

Cognitive changes, Hallucinations/illusions

Mood:

Depression
Anxiety
Apathy
Impulse control disorder/compulsive behaviors

Sleep:

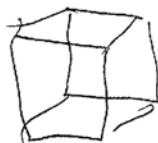
Insomnia
RBD
Snoring
RLS
Sleep study/consult

Other:

Skin: Cancer Seborrhea
Vision
Other



Visospatial Impairment & Daytime Hallucinations in 18 Months



Most likely Diagnosis?

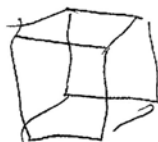
- A. Lewy body dementia
- B. Alzheimer disease
- C. Parkinson's disease
- D. Multiple system atrophy
- E. Progressive supranuclear palsy



Lipford et al. J Clin Sleep Med 2015
<http://dx.doi.org/10.5664/jcsm.4614>



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LBD Patient



To “fight” Parkinson’s is an old metaphor that doesn’t fit our understanding of PD



<https://unsplash.com/photos/0lmZsFe41zM>



Aiding or Training; Not Fighting Your Body

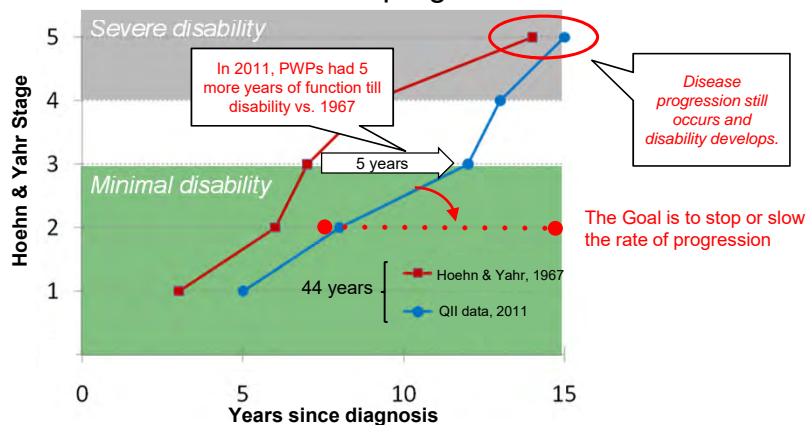


<https://www.caller.com/story/news/local/2017/09/29/corpus-christi-boxing-club-offers-boxing-classes-parkinsons-community/701968001/>

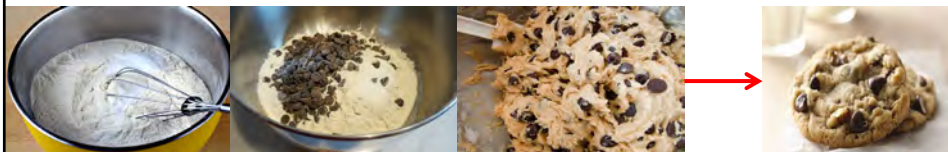


Levodopa: Improves Quality of Life

Levodopa: the “gold standard” for symptomatic improvement
does not affect rate of progression of PD



Symptomatic Motor Treatments: Dopamine & Cookie Analogy



1. The brain makes dopamine (cookies) from raw ingredients: lots of effort



2. Raw dough represents levodopa: it's faster to make dopamine than from scratch
Levodopa → bake for 9-11 minutes → Dopamine

3. Premade cookies represent dopamine agonists – they are fast but have greater risk of side effects, e.g., hallucinations, leg swelling, impulse control disorders like gambling, etc.



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Nausea Management: Carbidopa & Other Approaches

87 year old man with PD for one year who has nausea after taking morning dose of carbidopa/levodopa (Sinemet)

Medication regimen:

Carbidopa/levodopa (Sinemet) 25/100 tabs: 1.5 tabs by mouth 3 times/day

14 other non-PD medications

Background: carbidopa added to levodopa (=sinemet) to reduce nausea

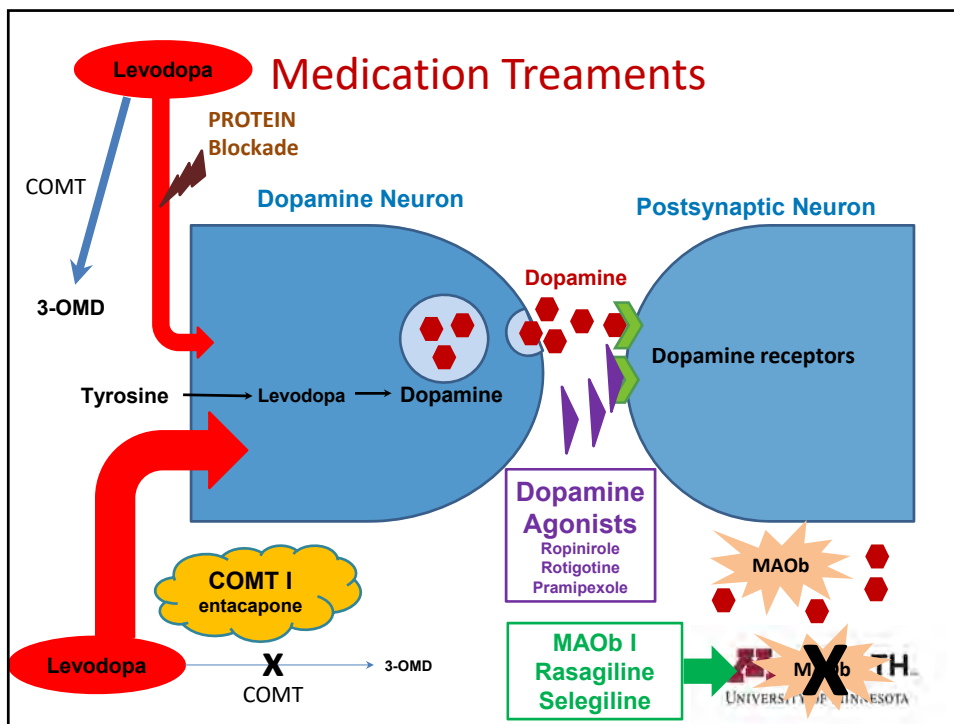
Actions:

Extra dose of carbidopa (Lodosyn) 25mg was given 30 minutes prior to the first carbidopa/levodopa dose of the day; nausea improved

Some other medications were moved to later in the day

- Take home: extra carbidopa can improve nausea caused by levodopa.

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Which are Side Effects of Dopamine Agonists?

- A. Impulse control disorders
- B. Leg swelling
- C. Sleepiness
- D. All of the above