
Parkinson's Disease: A Holistic Approach

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Movement Disorder Specialist

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Disclosures

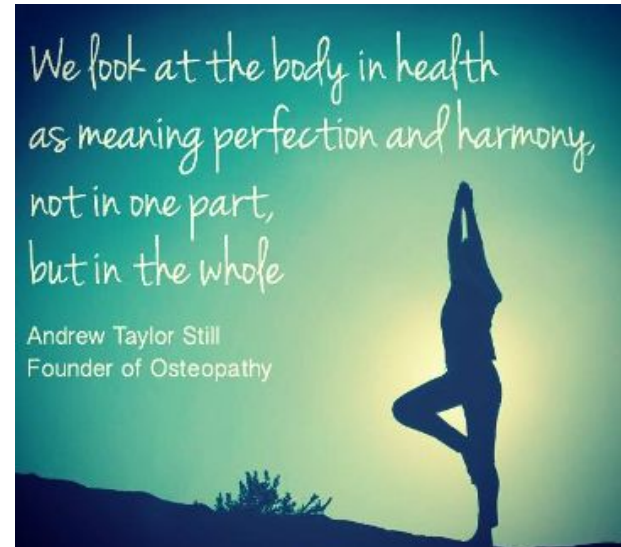
None

How did I end up here?

Medicine connects the teacher (**doctor**) with the one who suffers (**patient**)

Scientific knowledge is a **foundation**. Knowing treatment and diagnosis is **key**.

Communication and building trust is **essential**



The Joy of helping those with Parkinson's Disease

There is SO much we can do

Restoration of function

Improvement in walking, talking, mood, concentration, motivation

Completely Individualized

Every visit gives me an opportunity to improve your life

What is Parkinson's Disease?

Progressive condition

Progressive does NOT mean fast

“Bradykinesia” required for clinical diagnosis

Diagnosis does NOT take into account non motor symptoms

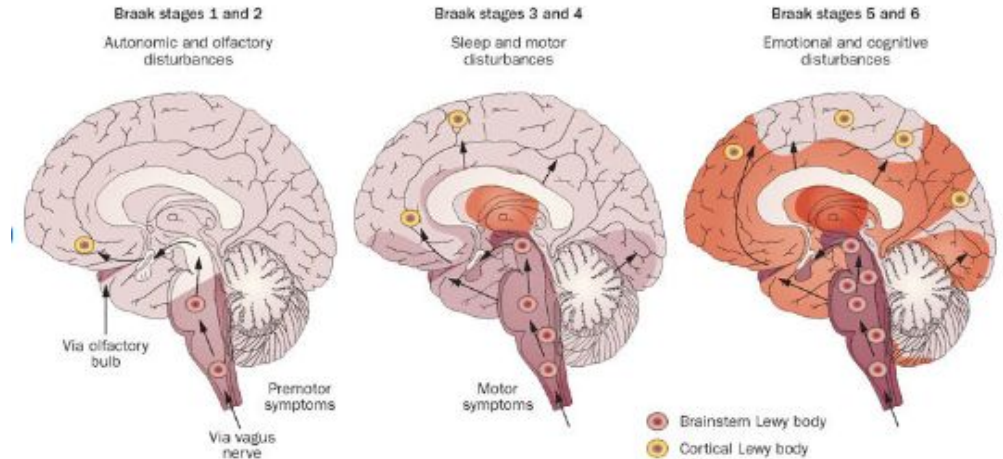


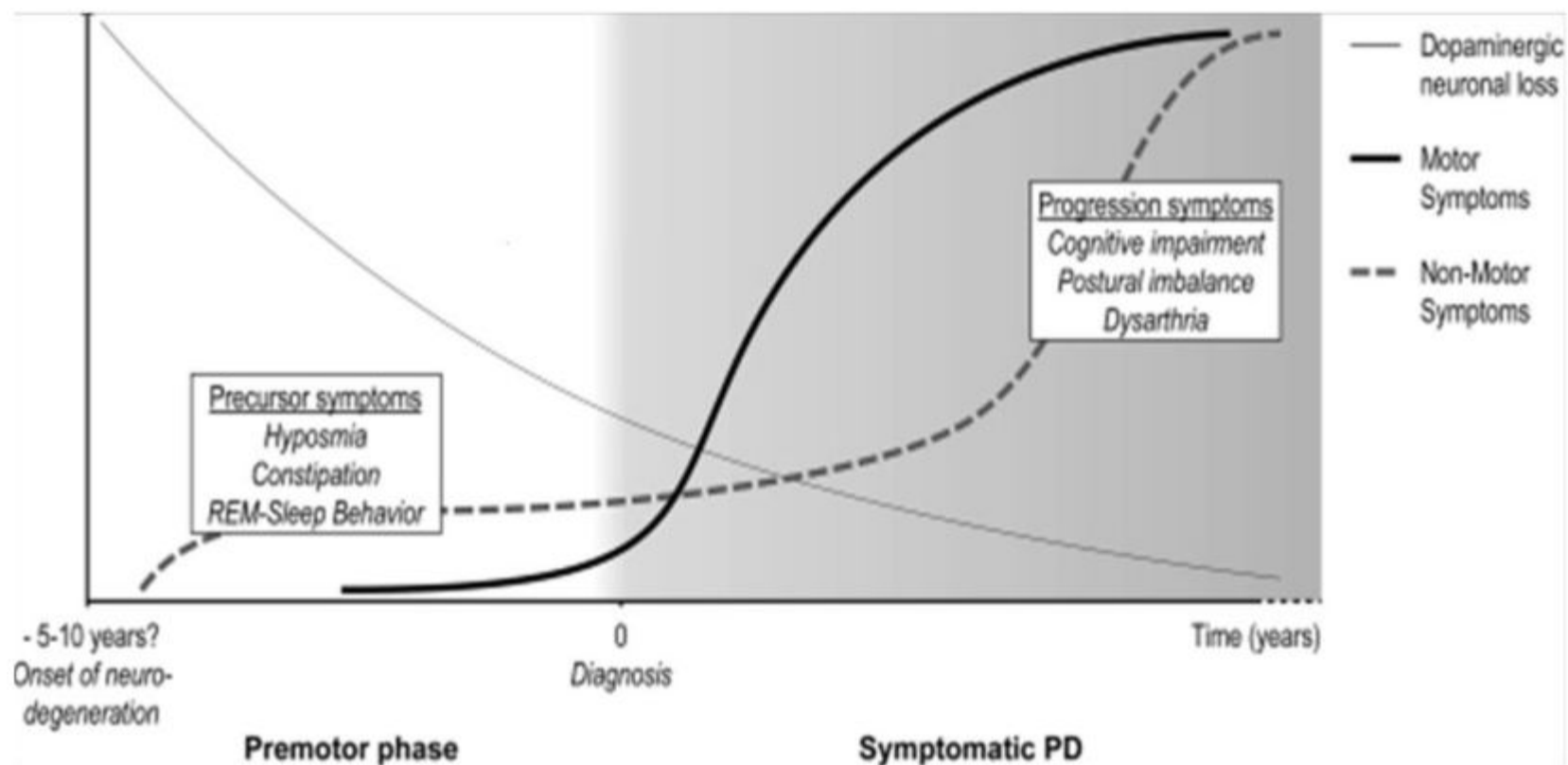
PD starts before your shaking

12-15 month average time to diagnosis after motor symptoms

Motor symptoms when cell loss exceeds 50-70% at least

Affects many neuronal pathways, not just dopamine!





What “stage” are you in?

PD doesn't abide by strict timelines

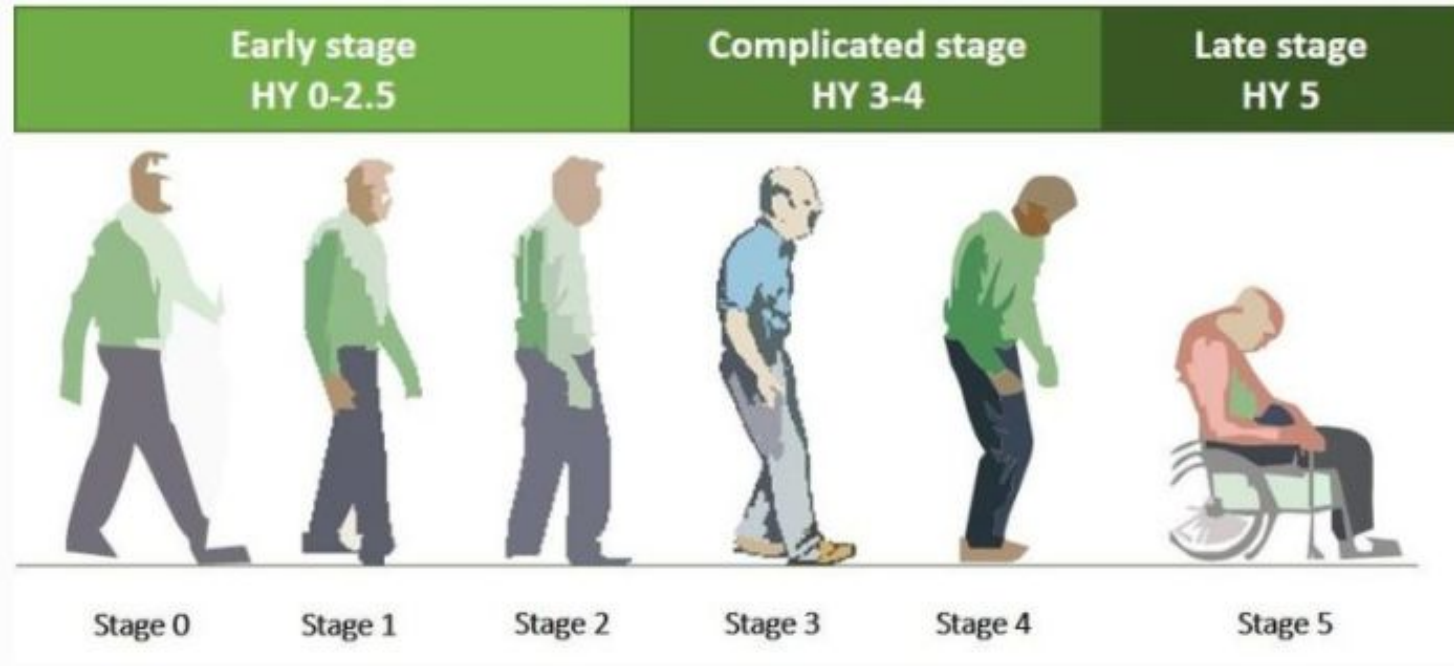
Early stage may suggest it doesn't affect you

Later stage may suggest you are out of options

There is always something we can do to help



Stages discrete without expert medication management

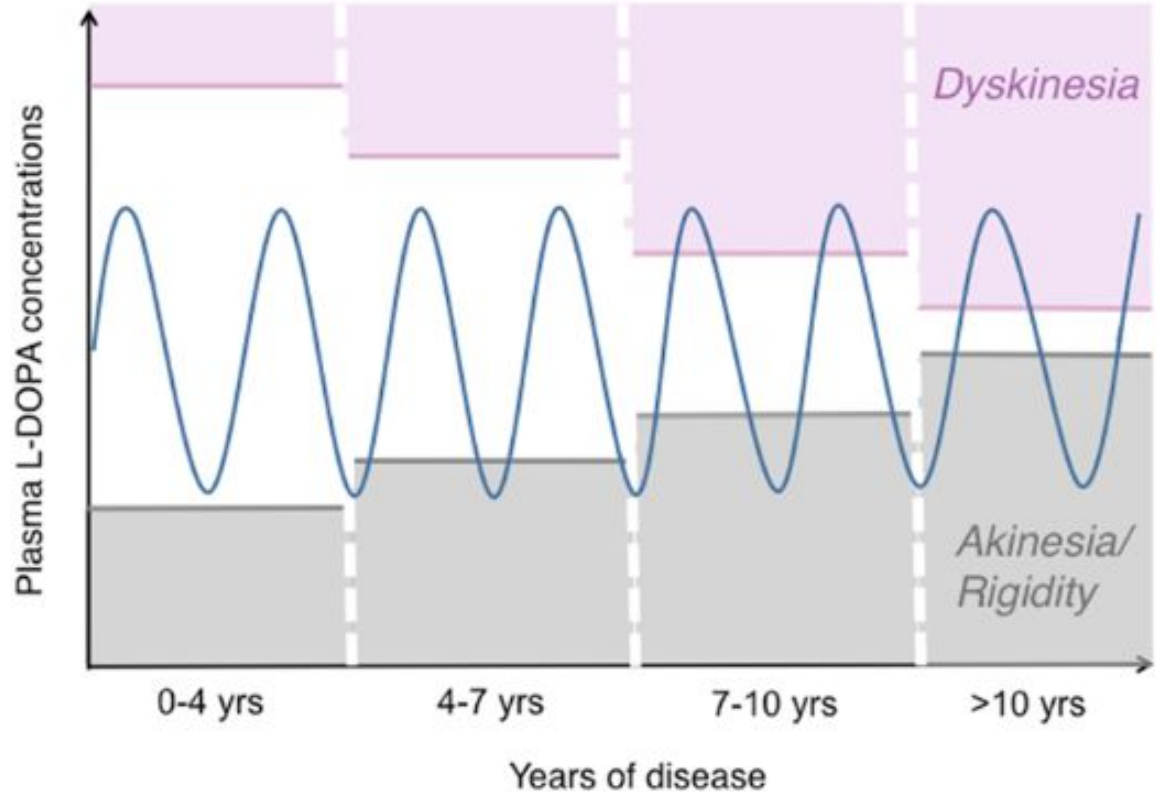


ON vs OFF

Pink = ON (excess movement)

Gray = OFF (paucity of movement)

Pink and Gray is unique for each individual



More ON, Less OFF

Our goal should be to limit motor fluctuations

Treatment with Dopamine replacement is vital

My Goal= Target motor fluctuations to get more ON and less OFF. Be a mastery of medication options

Your goal= Know your OFF and tell your specialist when you aren't ON

Treatments from all angles to maximize ON

Maintenance (Levodopa)

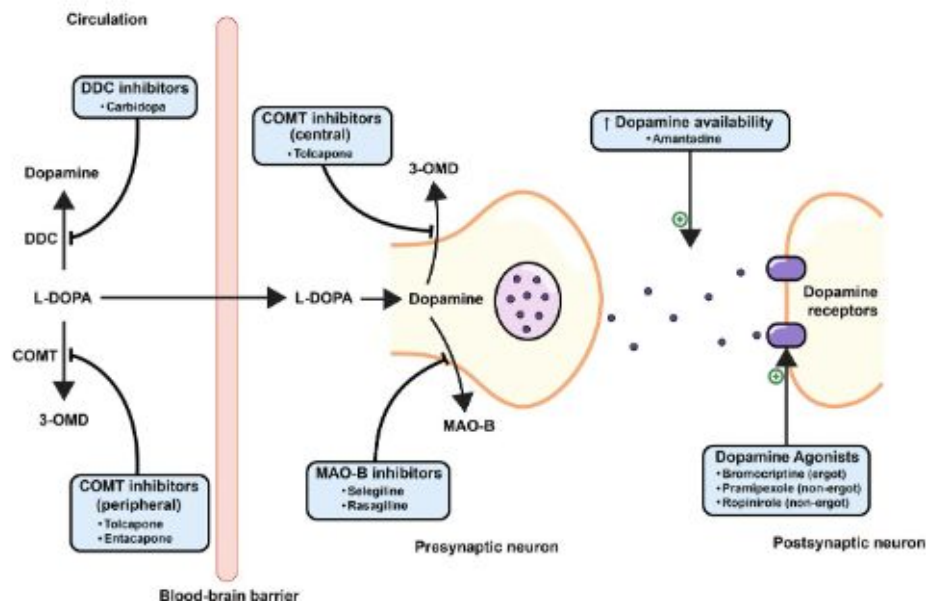
Increase duration (Entacapone)

Extra boost (Inbrija)

Less dyskinesias (Amantadine)

Steady control (Duopa or DBS)

Parkinson's Disease Drugs



Non-motor OFF

Just like motor symptoms, it improves with medications

Anxiety, brain fog, fatigue, pain, sweating, dizziness, urinary urgency, restless legs....

Vitals for life

Physical activity

Sleep

Nutrition



Physical Activity

Moderate intensity (50% max HR) cardio, 50 min, 3 times a week improved gait speed

Hamstring and quads resistance training + stretching improve gait

Gait/balance training (4-8 weeks) can have impact up to 1 year

Tai Chi and dancing also provide significant benefit

Reduce fall risk

Evidence shows it can slow progression!

Increases natural dopamine levels in the brain

Neuroplasticity to help restore affected pathways



BIG therapy

- Improvement in hesitation, slowness and smallness of movement
- Faster + more precise movements
- Trials show improved hand function, quality of life, improved mood, activities of daily living
- Improved motor AND non motor symptoms



Sleep!

- Sleep fragmentation is common in PD
 - Insomnia
 - Early waking
 - Difficulty falling back asleep
 - Frequent urination
 - Excessive movements
 - Tremors
 - Stiffness
 - Anxiety, depression



Excessive Daytime Sleepiness

- Poor quality of sleep
- Insomnia
- Mood changes
- Poor motivation
- Environment
- Physical inactivity/lack of stimuli
- Medications

Epworth Sleepiness Scale (ESS)

Situation	Chance of dozing (0–3)			
Sitting and reading	0	1	2	3
Watching television	0	1	2	3
Sitting inactive in a public place—for example, a theater or meeting	0	1	2	3
As a passenger in a car for an hour without a break	0	1	2	3
Lying down to rest in the afternoon	0	1	2	3
Sitting and talking to someone	0	1	2	3
Sitting quietly after lunch (when you've had no alcohol)	0	1	2	3
In a car, while stopped in traffic	0	1	2	3
Total Score				

0 = would never doze 1 = slight chance of dozing 2 = moderate chance of dozing 3 = high chance of dozing

Johns MW. *Sleep*. 1991;14:540.

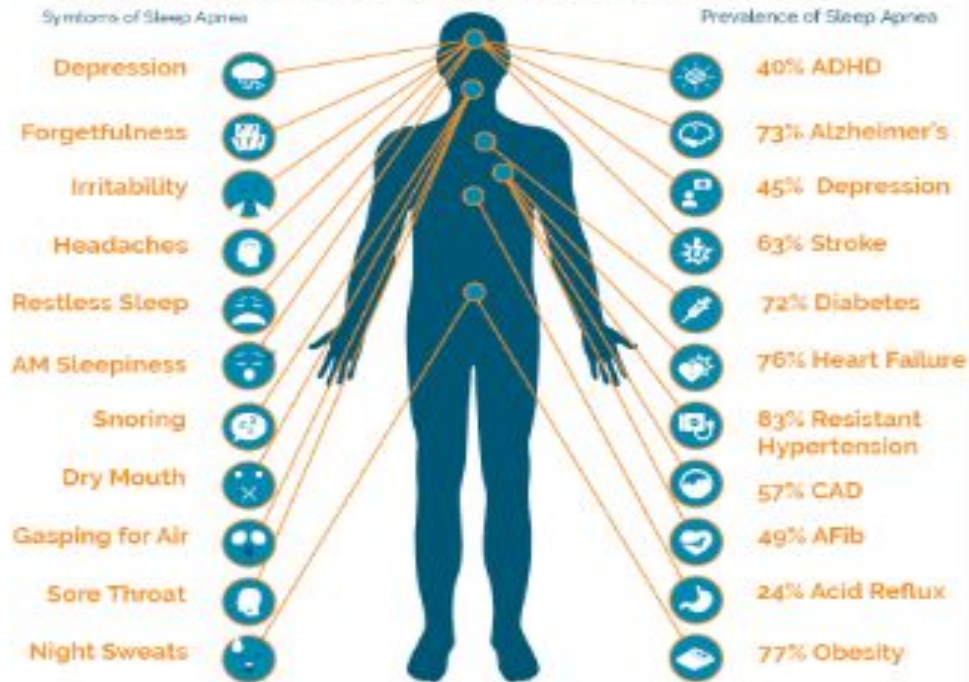
Check for sleep apnea!

Upper airway obstruction (rigidity and reduced movement) 24-65% of PD

PD and Sleep apnea association!

Ask your doctor about a sleep study!

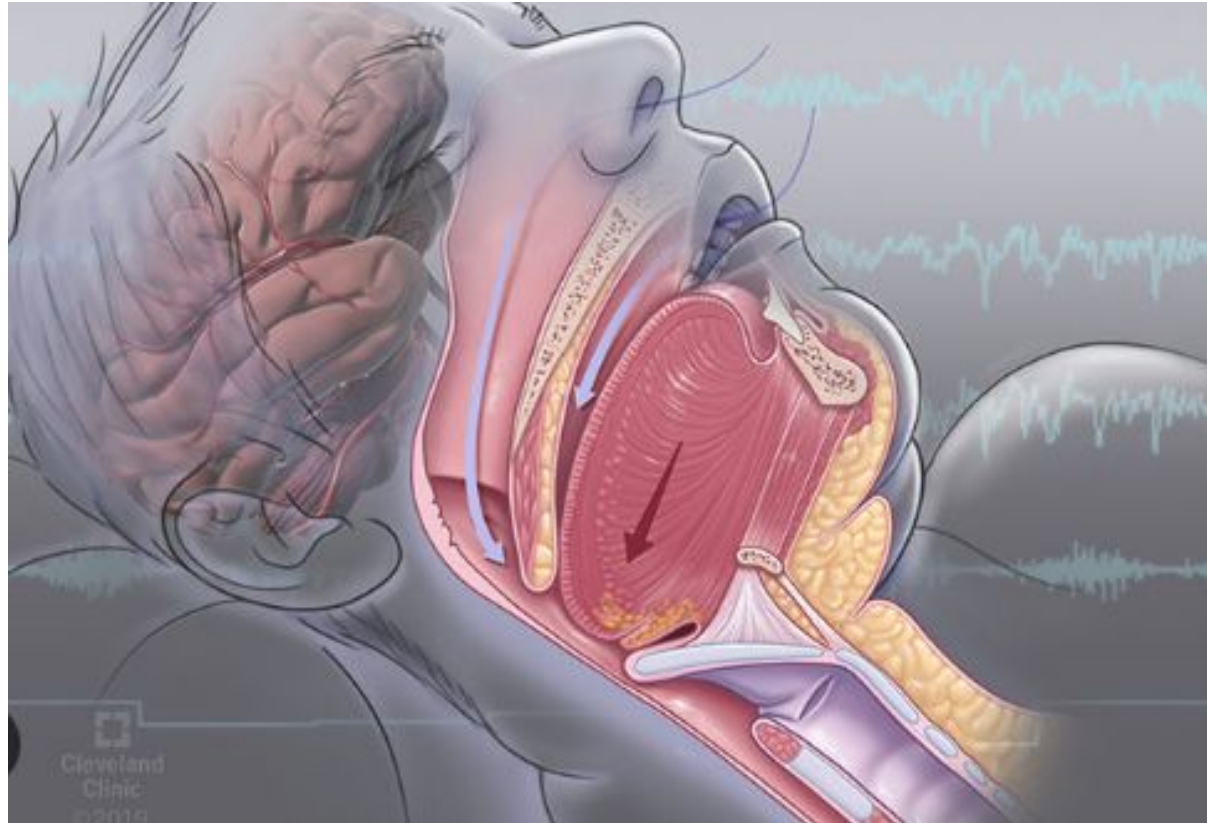
Obstructive Sleep Apnea (OSA) Common Symptoms & Associated Conditions



Inadequate Oxygen

Narrowed airway=
snoring

Blocked airway= apnea



Risk factors for Sleep Apnea

Sinus or nasal septum defects

Large tongue, posterior jaw

Alcohol, tobacco, sedatives

Supine sleeping

Obesity

Thick neck

Fig. 1

Screening tool for OSA: STOP-Bang

S	Does the patient snore loudly (louder than talking or loud enough to be heard through closed doors)?	Y/N
T	Does the patient often feel tired , fatigued, or sleepy during the day?	Y/N
O	Has anyone observed the patient stop breathing during their sleep?	Y/N
P	Does the patient have, or is the patient being treated for, high blood pressure ?	Y/N
B	Does the patient have a BMI of more than 35?	Y/N
a	Age. Is the patient older than 50?	Y/N
n	Is the patient's neck circumference greater than 40cm?	Y/N
g	Gender. Is the patient male?	Y/N

Scoring: **Y ≥ 3 = high risk of OSA**
Y < 3 = low risk of OSA

Treatment for OSA

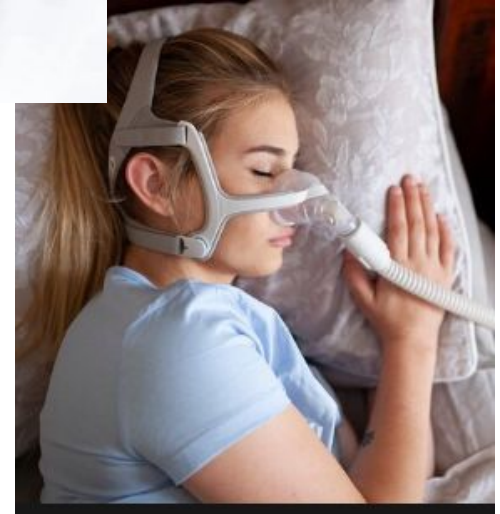
Weight loss

CPAP*

Oral Mandibular Device

Inspire

Surgery (Gastric bypass or oral)



Insomnia

Meds have limited evidence but
real life effects

Melatonin, Lunesta,
Mirtazapine, Trazodone,
Seroquel

But what is it that keeps you up?



Sleep Hygiene

- Caffeine in the afternoon
- Cut out alcohol at night
- Too loud, too bright
- Laying awake? Get out after 20 minutes!
- Natural light in the AM



Restless Leg Syndrome (and Periodic Limb Movements)

Inner Urge to move that reliefs with movements

Starts late at night but can occur earlier on

Up to 50% can develop RLS

75% develop it after PD diagnosis

Dopamine replacement, Iron, Gabapentin, Opioids (last resort)



REM Behavioral Sleep Disorder

~50% of PD (prodromal symptom)

Bed Rails, remove fragile objects,
bed partner awareness

- Melatonin
- Clonazepam
- Some antidepressants can make it worse



Nutrition: You are what you eat!

FDA only recommends 28g dietary fiber per day!

Fiber is from plants

Vitamins, minerals, water, antioxidants...

May help medication work better!



Fiber's impact

FDA recommended amount x 3 months in a study

- Improved quality of life
- Increase dopamine levels
- Reduced constipation

Imagine if you ate even more fiber!

Less glucose spikes, lower inflammation, weight loss...

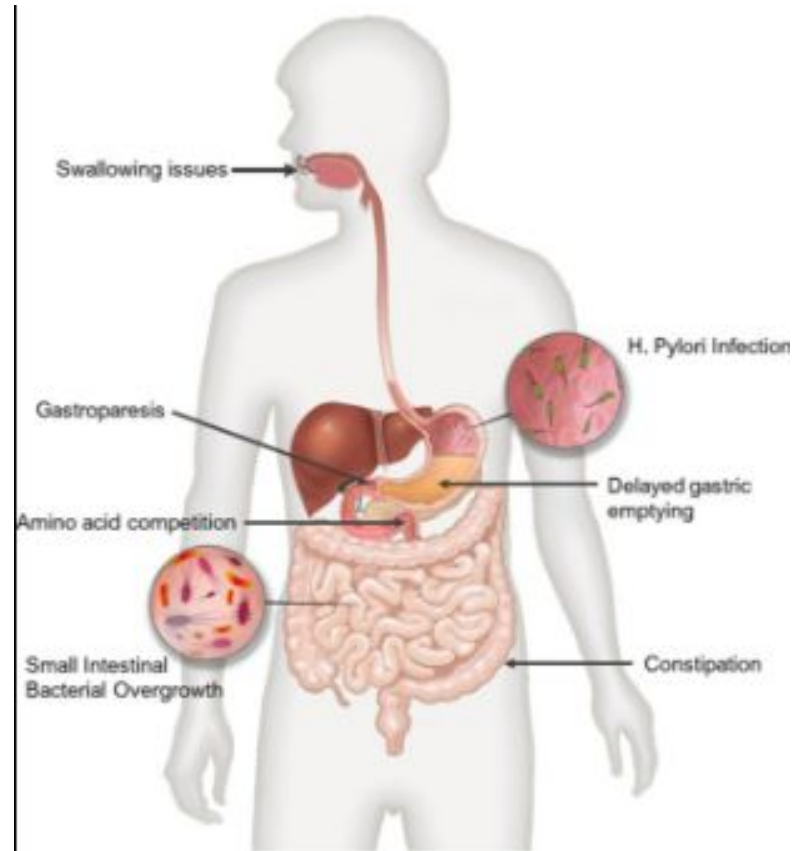


Roadblocks to Entry

Levodopa IS a protein

Protein in our diet can block its absorption into our blood and our brain!

Likely not impactful at beginning



Protein Redistribution Diet (PRD)

Multiple studies show **60-100% improvement in motor fluctuations**

Limit protein intake at breakfast and lunch (under 7 grams)

Eat most at dinner time

- More ON time during waking hours
- OFF time can be afforded more when asleep
- Consult with your physician and a dieticians
- Caution if you are underweight
- May need a dose adjustment

NATIONAL BESTSELLER

"A radical breakthrough... There is no question in my mind that it will work for you."

—MICHAEL OZ, M.D.

EAT TO LIVE

THE AMAZING NUTRIENT-RICH PROGRAM
FOR FAST AND SUSTAINED WEIGHT LOSS

JOEL FUHRMAN, M.D.

COMPLETELY REVISED AND UPDATED

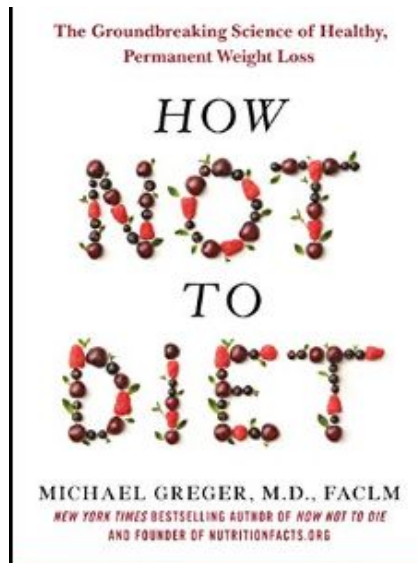
LOSE 20 LBS.
OR MORE
IN 6 WEEKS



Dr. Michael Greger

“Food as Medicine” TED Talk

Many videos on Parkinson’s Disease



“I feel like I’m going to pass out”

Orthostatic Hypotension

Conservative measures

- Hydration, stand up slowly, compression stockings, abdominal binder, avoid large meals

Adjustment of Medications

- PD med changes, revise BP meds
- Midodrine, Fludrocortisone, Droxidopa



“My mom wears Depends now”

Urinary urgency

Be mindful of fluid intake, limit caffeine, alcohol

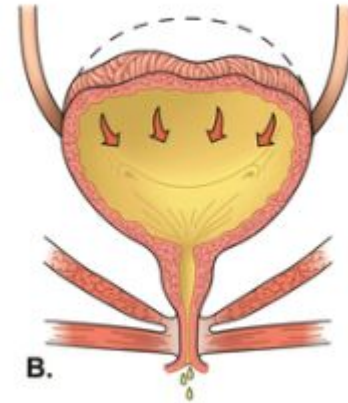
Scheduled bathroom breaks

Check prostate, talk with urologist

Medications:

- Oxybutynin, Tolterodine, Solifenacin (may cause sleepiness or confusion!)
- Mirabegron/Myrbetriq (may increase blood pressure)

Urgency Incontinence



B.
Bladder muscle contracts before the patient is ready to void.

“He always has to clean his shirt off”

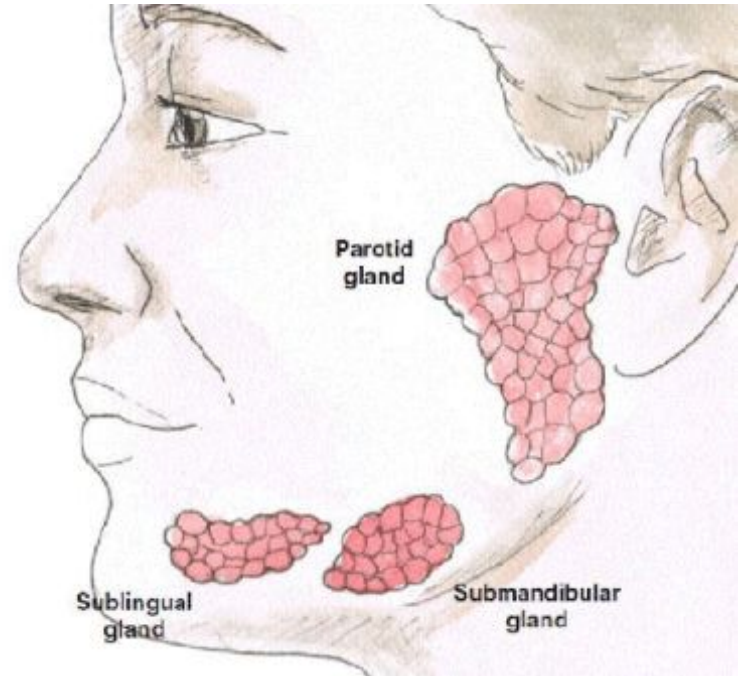
Excessive drooling

Chew gum or a candy

Atropine (eye) drops

Glycopyrrolate patches (lower risk to affect cognition)

Salivary gland injections



“It’s been over a week...”

Constipation

Hydration, fiber

“*Rancho recipe*” 1 cup bran/raw oatmeal, 1 cup of applesauce, $\frac{3}{4}$ cup of prune juice

- 2 tablespoons every morning

Stools softeners, laxatives

If needed, suppository or enema

More exercise= more regularity!



“He says I took his money”

Delusions and hallucinations

More advanced stages (75% have visual hallucinations at some point)

Concerning if insight is lost

Redirection, try not to argue, keep patient safe, calm down

- Nuplazid (First FDA approved for PD psychosis)
- Seroquel is commonly used
- Rivastigmine, Donepezil can help



“He is not himself anymore”

Depression, apathy, dementia

36% have depression, 50% develop dementia (at 10 years)

Eat healthy, sleep well and get moving!

Family, community support

Crossword puzzles are not enough...learn to play an instrument, a language, painting, volunteering

Donepezil, Rivastigmine, Memantine for memory

SSRIs (Lexapro, Prozac), Mirtazapine, Amitriptyline for depression



“I’m the main person that’s there for him”

Caregivers

Seek help from family, friends,
neighbors

Assisted/independent living

Get time to shower and sleep

See a therapist

In home PT, OT, speech, nursing

Short term or long term disability



When Non motor overtakes motor symptoms

Advanced Directives (when patient has cognitive capacity)

Durable power of attorney (acts in the best interest of the patient)

Palliative care specialist

Work with the movement disorder specialist

Dopamine replacement therapy may need to be reduced

Thank you!



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