



Neuro Challenge Foundation for Parkinson's

A Better Approach to Parkinson's

PD 101 **An Overview of** **Parkinson's Disease**

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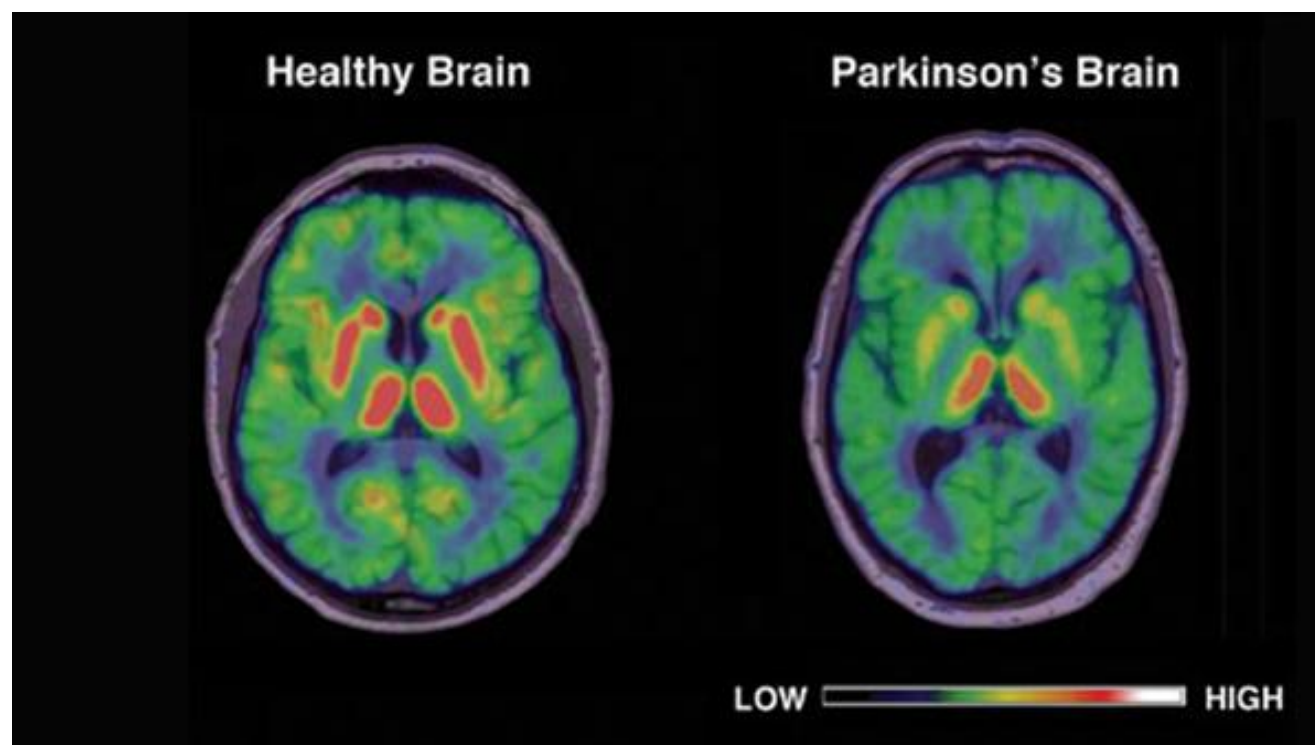
Our Mission

To Improve the Quality Of Life for people with Parkinson's and their care partners, TODAY.



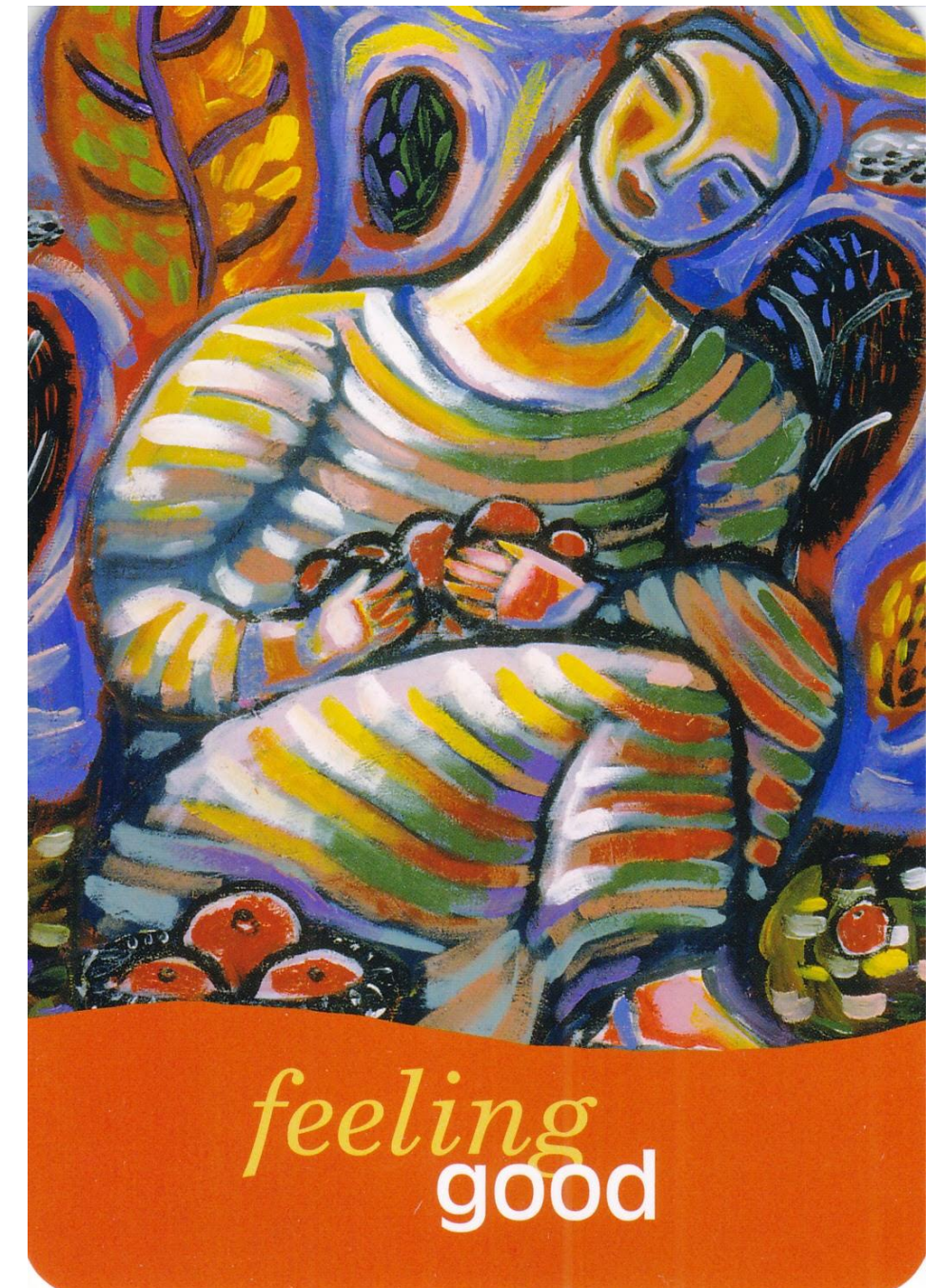
What is Parkinson's Disease?

- Parkinson's is a movement disorder that can affect your ability to perform common, daily activities.
- A chronic and progressive disorder of the brain and central nervous system whose symptoms can gradually worsen over time.
- Marked by a deficiency of a chemical messenger in the brain called dopamine.
- Characterized most commonly by motor symptoms but also manifests as non-motor symptoms.



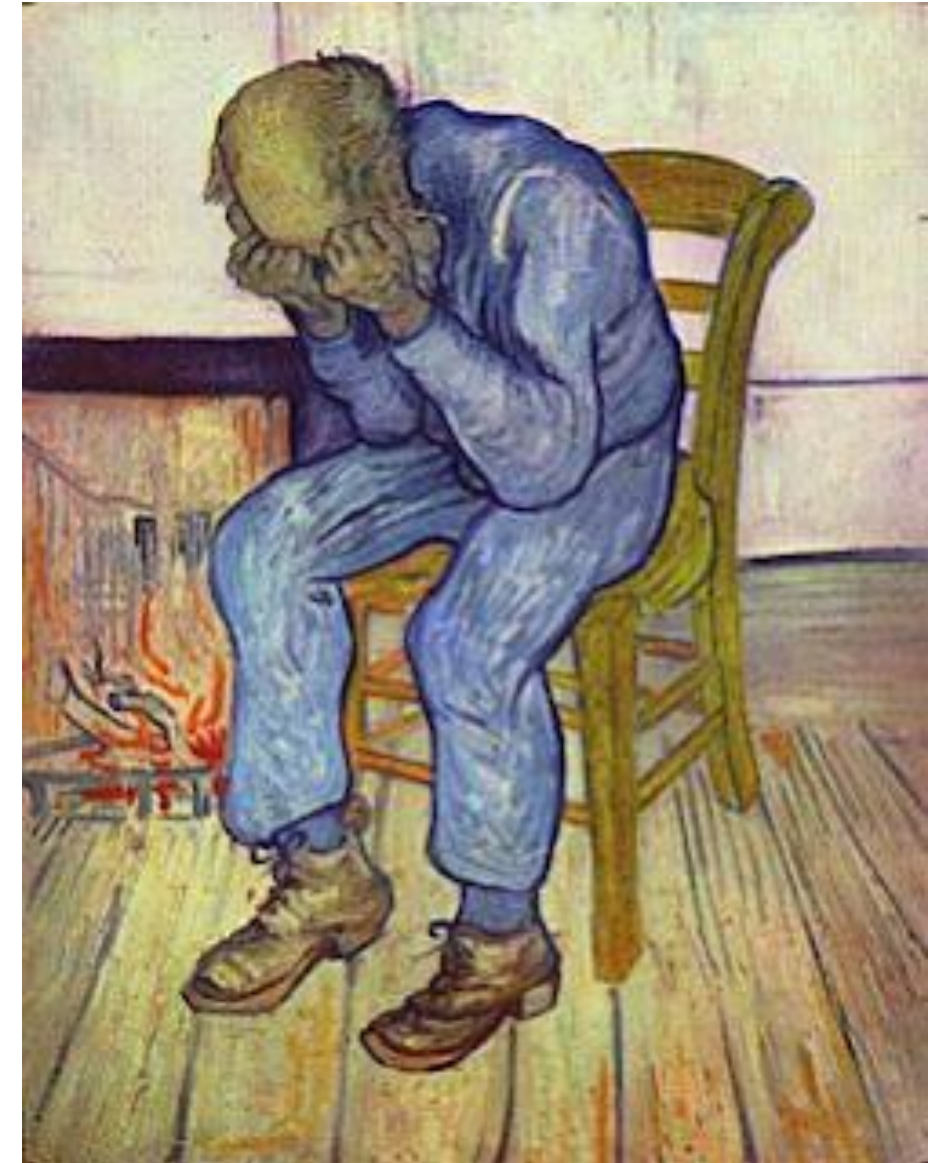
The Roles of Dopamine

- Movement
- Memory
- Pleasurable Reward & Motivation
- Behavior & Cognition
- Attention
- Sleep & Arousal
- Mood
- Learning



How it Feels to be Depleted

- Tired
- Forgetful
- Apathetic-unmotivated
- Unhappy
- Low sex drive
- Uninterested
- Inattentiveness
- Sleep Issues
- Mood Swings
- Poor Concentration



10 Early Signs of Parkinson's Disease

- **Tremor**
- **Small Handwriting**
- **Loss of Smell**
- **Trouble sleeping**
- **Difficult moving or walking**
- **Constipation**
- **A soft or low voice**
- **Masked facial expression**
- **Dizziness or fainting**
- **Stooping or hunching over**

The Four Main Symptoms

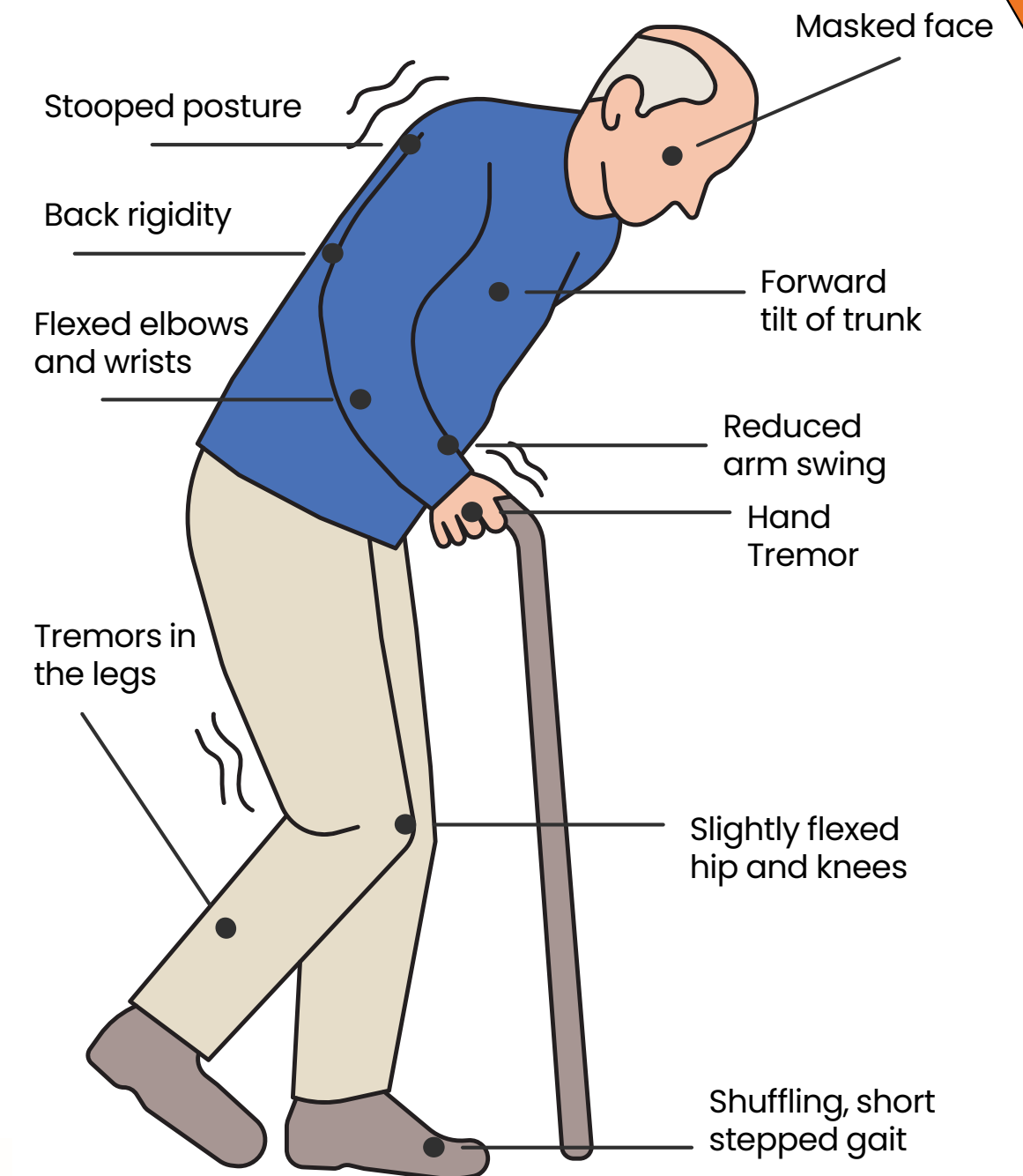
Two of the four main symptoms must be present over a period of time for a neurologist to consider a PD diagnosis:

- 1. Shaking or tremor**
- 2. Slowness of movement (bradykinesia)**
- 3. Stiffness or rigidity of the arms, legs or trunk**
- 4. Trouble with balance and possible falls (postural instability)**

Most Common Signs of Parkinson's

Motor Symptoms

- Involuntary tremors (rhythmic shaking) of limbs
- Slowness of movement (bradykinesia)
- Rigidity or stiffness of the muscles
- Impaired balance and postural instability
- Difficulty initiating movements (akinesia)
- Episodes of “freezing”-inability to move during execution of movement sequence
- Over reactivity of muscles (dyskinesia)



Most Common Signs of Parkinson's

Non-Motor Symptoms

Neuro psychiatric

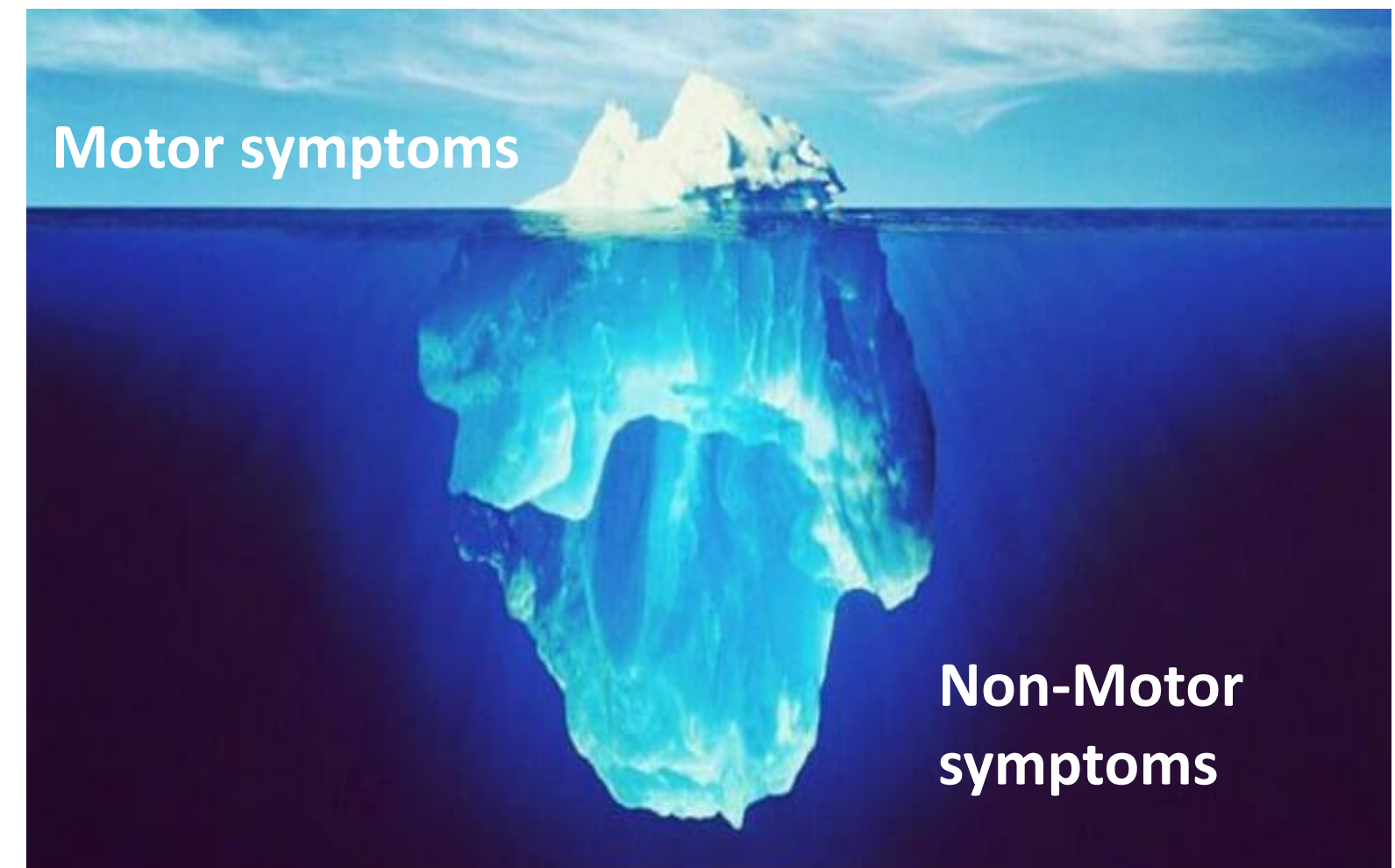
Anxiety
Depression
Sleep disorders
Cognitive impairment
Apathy

Sensory

Speech/swallowing
Loss of smell
Pain
Visual disturbances

Autonomic- not controlled consciously

Orthostatic hypotension
Constipation
Urinary dysfunction
Sexual dysfunction
Sweating



Stages of Parkinson's

- **Mild:** Movement symptoms may be inconvenient but do not affect activities of daily living
- **Moderate:** The body moves more slowly and trouble with balance or coordination may develop
- **Advanced:** Great difficulty walking, person may not be able to get out of bed or may need to use a wheelchair regularly

	Early PD		Mid-stage PD	Advanced PD	
Stage of Parkinson's Disease	1	2	3	4	5
Severity of Symptoms	MILD Symptoms of PD are mild and only seen on one side of the body (unilateral involvement)	MILD Symptoms of PD on both sides of the body (bilateral involvement) or at the midline	MODERATE Symptoms of PD are characterized by loss of balance and slowness of movement	SEVERE Symptoms of PD are severely disabling	SEVERE Symptoms of PD are severe and are characterized by an inability to rise
	SYMPTOMS Tremor of one hand Rigidity Clumsy Leg One side of the face may be affected, impacting the expression	SYMPTOMS Loss of facial expression on both sides Decreased blinking Speech abnormalities Rigidity of the muscles in the trunk	SYMPTOMS Balance is compromised Inability to make the rapid, automatic and involuntary adjustments All other symptoms of PD are present	SYMPTOMS Patients may be able to walk and stand unassisted, but they are noticeably incapacitated Patient is unable to live an independent	SYMPTOMS Patients fall when standing or turning May freeze or stumble when walking Hallucinations or delusions.

Who Has Parkinson's Disease

**1+ million
people in
the USA**

- 100,000 Americans diagnosed/year
- 1.5 million by 2030.

10,000 people are affected by PD in the six counties we serve

Incidence of Parkinson's disease increases with age with average age of onset being 62

**10+ million
people
worldwide**

- Parkinson's is the #2 neurodegenerative disease behind Alzheimer's
- Men 50% more likely

15% of people with PD are diagnosed before age 50 (classified as young onset)

What Causes Parkinson's Disease

Environmental Factors: There is evidence linking PD with pesticide exposure, chemicals of war and other toxins.

Repeated head injuries (triggering abnormal protein accumulation)

Genetic Factors: It's estimated that less than 15% of cases of Parkinson's disease are primarily due to genetic causes

Age: is the main risk factor

Idiopathic: No known origin

Diagnosed with PD, Now What?

- **Get a referral to a Neurologist or a Movement Disorder Specialist**
- **Seek care from a physical, speech, or occupational therapist**
- **Start a regular exercise program**
- **Talk with family and friends who can provide you with the support you need**
- **Plan for your future**



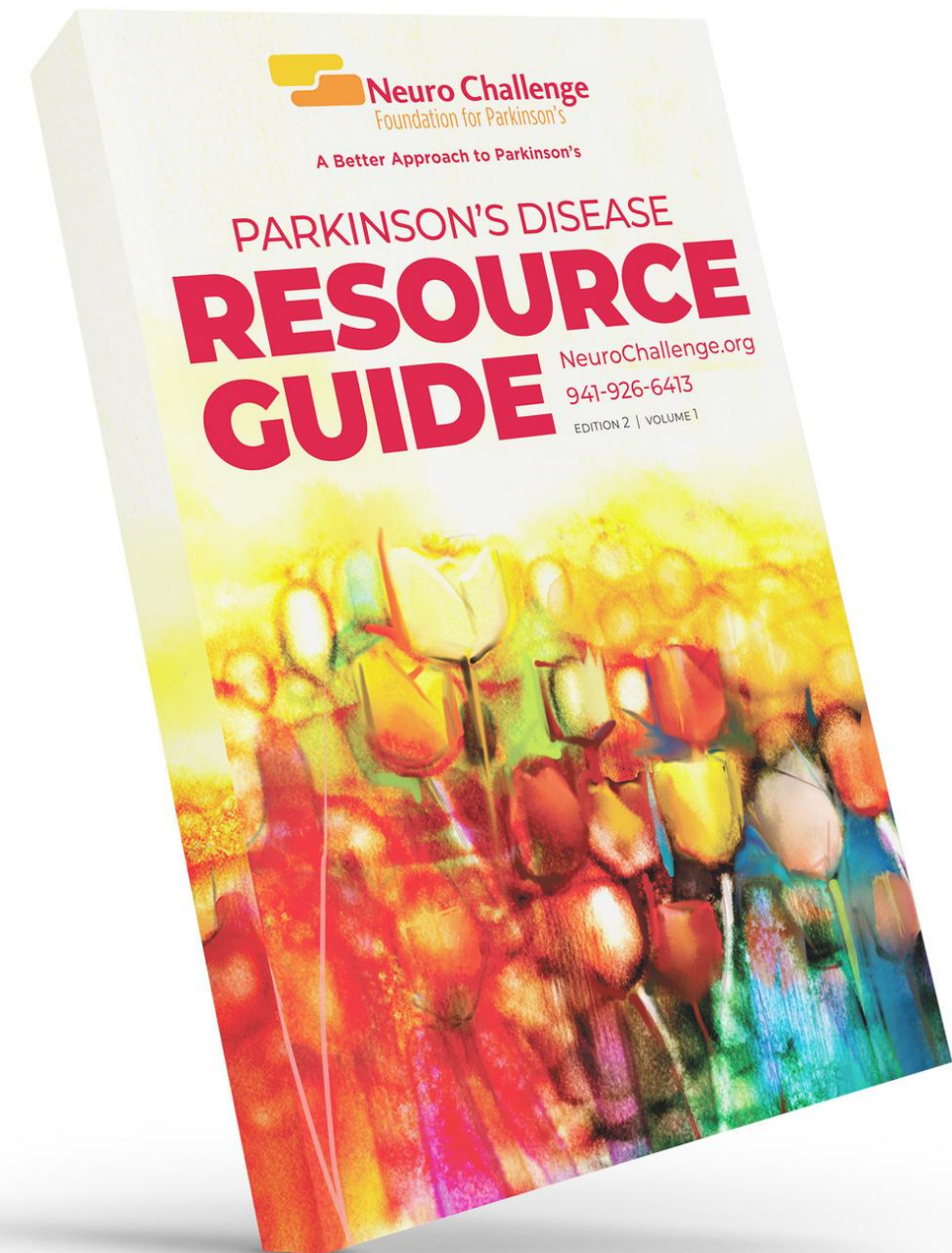
Parkinson's Treatment Team

- **YOU- You are your own best advocate!**
- **Care Partner/Support System**
- **Neurologist/Movement Disorder Specialist**
- **Therapists- physical, occupational, speech**
- **Mental Health Professionals**
- **Nutritionists**
- **Personal Trainers**
- **Social Workers/Nurses**
- **Other Specialty Care depending on individual needs- dermatologist, gastroenterologist, sleep specialist, urologist, alternative medicine, neuro-ophthalmologist, pain management, pharmacist**



Be Empowered to Fight Parkinsons

- **Manage medications**
- **Exercise regularly**
- **Proper nutrition**
- **Educate yourself**
- **Seek social support**
- **Participate in Research**
- **Have a positive attitude!**



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Care Advising



A Concept Born out of Dr Sutherland's neurology practice, Care Advising is a unique and effective way to be sure people receive support and education about their new diagnosis.

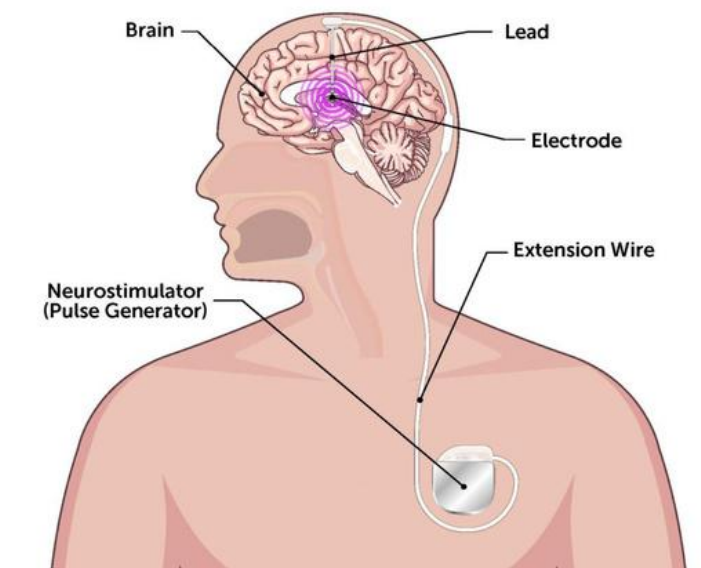


Medication

- **Helps manage symptoms and prolong current level of function**
- **Replaces dopamine that is no longer being produced**
- **Carbidopa Levodopa remains the gold standard**
- **Timing of medication administration is critical to keep levels steady**
- **Take with water and avoid taking with protein**
- **Individualized evaluation and treatment is necessary as each person with PD is unique**
- **Other treatment options: deep brain stimulation (DBS) and focused ultrasound**



Deep Brain Stimulation (DBS)



Exercise

- **Crucial to help maintain balance, mobility, strength, and flexibility**
- **Is as important as medication in disease management**
- **Evidence shows exercising may help slow the progression of Parkinson's**
- **Selection of ideal exercise program is dependent on individual disease stage/severity**
- **Improves ability to continue activities of daily living**





POWER



Nutrition

- Protein management optimizes medication effectiveness
- Hydrate! Adequate water intake helps all body systems function well
- Lean proteins, fruits, vegetables (Mediterranean/Mind diet)
- Fiber rich foods
- Limit sugar and caffeine intake as it affects sleep
- Proper nutrition can lessen some of the manifestations of PD: weakened bones, constipation, dehydration, weight loss



Education

Knowledge is power

**Education Forums
Wellness Clubs
Webinars-YouTube
Symposiums
Annual EXPO**

**Learn about the most current research,
therapies, and treatment options for YOU**



A Better Approach to Parkinson's





Social Support

- **Participate in activities that you enjoy**
- **Attend support groups**
- **Stay engaged with family and friends**

Being engaged in programs with individuals facing similar challenges is empowering and helps guard against social isolation, fear, and depression



Parkinson's Connect Empowering Through Mentorship



Consider being in a clinical study
Clinicaltrials.gov



Positive Attitude

Be a Parkinson's Fighter
Focus on the present moment

Be adaptable

Maintain a state of acceptance and gratitude





Thank You



A Better Approach to Parkinson's

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QUESTIONS?



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