Wisconsin Public Psychiatry Network Teleconference (WPPNT)

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WPPNT Reminders

How to join the Zoom webinar

- **Online:** https://dhswi.zoomgov.com/j/1606358142
- **Phone:** 669-254-5252
- Enter the Webinar ID: 160 635 8142#.
  - Press # again to join. (There is no participant ID)

Reminders for participants

- Join online or by phone by 11 a.m. Central and wait for the host to start the webinar. Your camera and audio/microphone are disabled.
- The evaluation survey opens at 11:59 a.m. the day of the presentation. A link to the evaluation survey is posted when the materials are posted.
- Ask questions to the presenter(s) in the Zoom Q&A window. Each presenter will decide when to address questions. People who join by phone cannot ask questions.
- Use Zoom chat to communicate with the WPPNT coordinator or to share information related to the presentation.

- Participate live to earn continuing education hours (CEHs). Complete the evaluation survey within two weeks of the live presentation and confirmation of your CEH will be returned by email.
- A link to the video recording of the presentation is posted within four business days of the presentation.
- Presentation materials, evaluations, and video recordings are on the WPPNT webpage: https://www.dhs.wisconsin.gov/wppnt/2025.htm

Parkinson's Disease: Working with Patient's & Families

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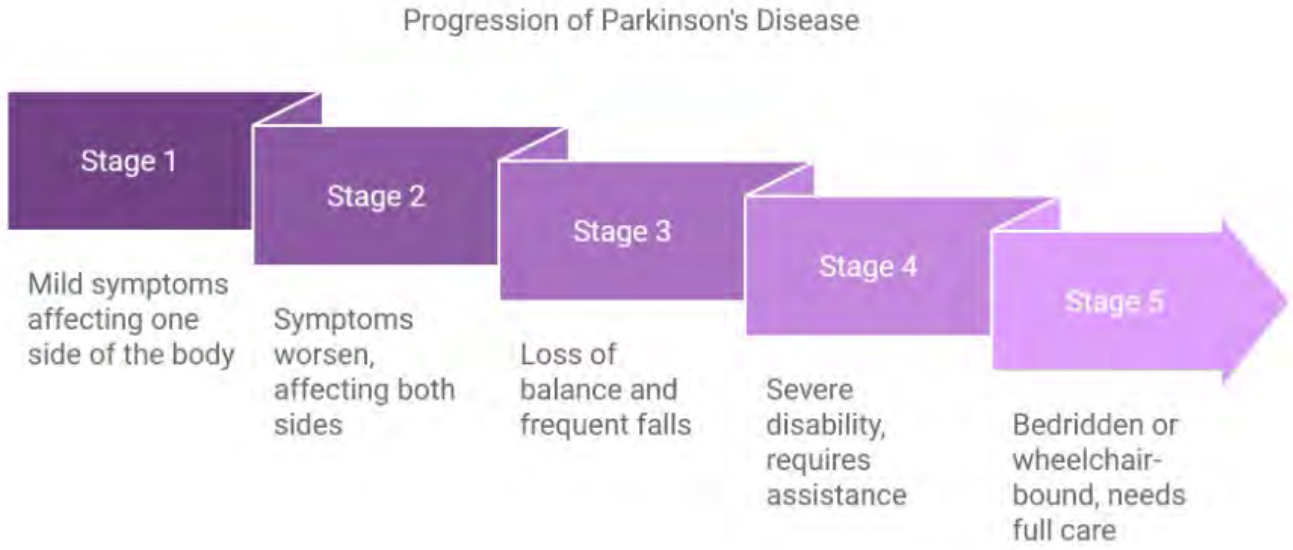
Parkinson's Disease (PD)

- A neurodegenerative disease, decline of structure & function of the central nervous system (CNS) & peripheral nervous system (PNS) *(they deliver messages to & from the brain to body)*
- NOT curable
- Stage 1- 5
- Motor and non motor symptoms ALWAYS progress, maybe slowly and may have times during the day when symptoms are less.



Symptoms (Parkinsonism)

Motor symptoms

- Tremor (70%)
- Bradykinesia (slow movement)
- Rigidity and postural instability, cogwheeling, stooped posture, shuffling, festination (rapid small steps), difficulty turning, reduced arm swing
- Hypomimia (decrease blink rate) and micrographia (small writing), Anarthria & dysarthria stooped posture, shuffling, reduced arm swing, fesintation (rapid small steps) & difficult turning

Non-motor & Psychiatric

- Depression 40-50% & apathy
- Sleep: Restless Leg Syndrome (RLS), acting out dreams
- Dementia hallucinations
- Subcortical dementia: forgetfulness, difficulty making decisions and multitasking changes personality and slow thinking.
- Difficulty swallowing
- Low blood pressure (BP)
- Drooling
- Bladder bowel slow control
- Facial masking
- Loss of smell

Pseudobulbar Affect

- Late-stage
- Rapid change of emotions
- Crying
- Laughing

Soda Fountain at age 8

- Sitting at the counter
- Ordering and waiting for grilled cheese
- Noticing Mr. Very Old
- Face
- Drooling excessively
- Tremor
- Posture
- Checking out shuffle and festination
- 11 years later Mr. Very Old & me at 16 -19 same place same disease.
- Nursing school finally figured it out.

Causes & Risk Factors

- Loss of cells that produce dopamine
- **Older** cells shrink more prone to injury & gene morph
- **Genetics** 15% family history, total of 5-10 % of PD are genetic about 7 genetic genes noted. Early onset more
- **Environmental** Heavy metals, pesticides, psycho-stimualants (amphetamine, methamphetaime & cocaine
- **Head trauma** Traumatic Brain Injury (TBI) possible link
- **Drug induced PD** usually reversable antipsychotics fluphenazine, pimozidine, haloperidol, anti-nausea chlorpromazine, droperidol, promethazine & meds that treat hyperkinetic movement disorders Tertabenazine)
- **Virus** Human pegivirus (HPgV) a harmless virus may cause immune response that influence PD pathogenesis.

Epidemiology & Risk Factors

- Affects 1 million
- Average age of onset 60
- Can occur in those 30-40’s
- Men more likely
- Hispanic & Caucasian most affected
- Six-year risk of death 4 times greater that matched Medicare beneficiaries (Doherty, Colleen 2025)

Types of PD

- **Idiopathic**: most common, older onset 60. sharking, slow, rigidity poor balance may start on one side. Non motor symptoms: depression, anxiety apathy, sleep, fatigue, loss of smell, urinary urgency, forgetfulness, psychosis (auditory or visual)

- **Early onset**: Rare, 21-45. Progress slowly. Treatment different.

- **Familial:** 10-15% may be inherited by mutations in genes.

- **Secondary:** Exposure to a drug (antipsychotic), head trauma, toxins, brain infection or lacunar stroke basal ganglia or substantia nigra (block dopamine levels)

Atypical Types of PD

- **Atypical:** neurodegenerative disease with similar symptoms. Protein build up in different parts of the brain.
- **Dementia with Lewy bodies:** Memory, depression, delusions, falls, agitation/aggression hallucinations and REM sleep acting out dreams & PD symptoms.
- **Multiple System Atrophy (MSA):** Rare, loss of nerve cells protein clumps. Slow movement, fainting, dizziness, REM, slurred speech, dysphagia
- **Progressive Supranuclear Palsy (PSP):** Rapid progression
- **Corticobasal syndrome:** Rare. Muscle contractions, myoclonus (jerks) movement of limb.

Dementia in PD

- 80% will develop dementia on average 10 years after movement symptoms.
- 20-40 % with PD have dementia (Doherty, Colleen 2025)
- **Lewy body Dementia** symptoms onset time of motor symptoms, (sticky clumps of protein impair chemical messaging leading to cells that produce dopamine) also amyloid & tau.
- **Cognitive**: executive dysfunction (multitasking, problem solving, planning), visuospatial (3 dimension), attention, verbal memory, apathy, delusions, REM sleep behavior or visual hallucinations.

  Example: Mr. Sinemet and the factory supervisor.

- **Parkinson's Dementia:** One year or sever after motor symptoms but faster decline, yet motor symptoms respond better with meds.

Care tips for dementia

- Stay calm & speak slowly
- Do NOT interrupt
- “I can not see what you are seeing or hearing”
- Do NOT question or doubt the hallucination “this maybe makes you feel uncomfortable or frightened or confusing”
- Gentle distraction & reassure they are safe
- Lighting: avoid shadows & mirrors.
- Assess symptoms and report (pattern time of day)
- Safety if they are angry (remove objects, do NOT corner them).

Treatment

- **Medications:** Sinement (levodopa) and carbidopa (prevent levo from breaking down to dopamine before crossing over to the brain. Medications are NOT toxic and safe.
- **Psychotherapy** aimed at grief, coping skills, CBT interpersonal skills and integrate resources (Social Worker).
- **Deep Brain Stimulation** (DBS)
- Duopa **gel therapy**: feeding tube infusion
- **Ablative Surgery**: radio frequency to affected brain tissue

Medication Dopaminergic Agents

- Main therapy
- Levodopa L-dopa: Increases dopamine levels often used with Carbidopa which blocks the conversion of dopamine outside of the brain so that levodopa can be taken. Risk of dyskinesia so younger people might avoid this Rx.
- Dopamine Agonists: stimulate dopamine receptors can cause drowsiness, visual hallucination impulse control (Mirapex /pramipexole)
- MAO-B inhibtitors decrease or block MOB an enzyme that breaks down dopamine. (Azilect/rasagiline safinamide, elderpryl/selegiline.

Medications -2

- Amantadine: antiviral increases dopamine effects in the brian may block glutamate docking sites.
- Anticholinergics: decrease action of acetylcholine which helps regulate movement but should be avoided in older due to side effects (Artane/trihexphenidyl or Cognetin/benztropine
- COMT inhibitors: Add-on to levodopa In advanced PD prevents breaks-down of dopamine

Depression in PD

- Occurs 30 to 50%
- 10-15% in early course.
- Can be presenting symptom.
- Risk factors: History of depression in early life, female, cognitive impairment, advanced disease, postural instability and gait difficulty.
- Persistent and worsens
- Change in brain structure signaling by neurotransmitters, inflammation, neurotropic factors deficits, in MAO, DA in frontal lobe & subcortical.

Depression

A key determinant of poor health related to:

- Quality of life (QOL_
- Decrease functioning
- Cognitive impairment
- Stress for caregivers

Treating depression & anxiety

- 40% but often missed, overlapping symptoms of PD and depression.
- Dopamine depletion
- Rx early
- CBT
- Fish oil, antidepressant (SSRI's SNRI's & Tricylclics dopamine agonist pramipexole/Mirapex, TMS)
- Support group
- Music stimulates dopamine production
- Ask: cooked meal, get togethers, help with domestic tasks, driver,

Treatment (cont.)

- Diet: MIND diet Mediterranean-DASH (antioxidant 7 anti-inflammatory & B/P)
- Coenzyme Q10 being studied
- Exercise
- Physical & Occupational therapy
- Tai chi: improve gait and balance
- Acupuncture may help motor symptoms limited data
- CBD: Limited inconclusive information. May help motor skills and REM sleep.

Treatment for cognition

- Learn something new / new skill.
- Use nondominant hand
- Socialize (join club, volunteer, walking group, class, time with others)
- Draw a map from memory
- Brain games: sudoku, puzzles, Scrabble, brainteasers & mazes.
- Mindful meditation

Relationships Changes

- Significant other, friends, family & co-workers.
- Cannot control how people react to your condition.
- People may not understand your disease or what you are feeling (minimize it/sugar coat)
- Manage others grief, anger & unrealistic expectations.
- Feel like a burden
- Hard to manage communications with mood swings & when feeling ill or depressed
- You are not your disease.
- Nurture your relationship with yourself.
- Accept help from others and be specific on what you need.
- Schedule weekly or daily check ins with significant other/closest relationships.
- Couple / family therapy.

SUD to PD and PD to SUD

- Drugs of abuse are known to cause movement disorders.
- Primary movement disorders are associated with use and abuse of alcohol and dopaminergic medications.
- Movement disorders may be associated with alcohol, cocaine, heroin, amphetamine and methcathinone.
- There is an interaction between alcoholism and alcohol-responsive movement disorders, such as essential tremor and myoclonus-dystonia.
- Potential for abuse of antiparkinsonian dopaminergic agents in patients with Parkinson's disease (PD).

Reference: Andres Deik, Rachel Saunders-Pullman, Marta San Luciano (2012) Substance of abuse and movement disorders: complex interactions and comorbidities

Cocaine

- While we specifically know the short-term side effects induced by cocaine, unfortunately, we currently do not have exhaustive information about the medium/long-term side effects of the substance on the body. The scientific literature progressively highlights that the chronic use of cocaine is related to an increase in cardio- and cerebrovascular risk and probably to a greater incidence of psychomotor symptoms and neurodegenerative processes. **Several studies have highlighted an increased risk of antipsychotic-induced extrapyramidal symptoms (EPSs) in patients with psychotic spectrum disorders comorbid with psychostimulant abuse. EPSs include movement dysfunction such as dystonia, akathisia, tardive dyskinesia, and characteristic symptoms of Parkinsonism such as rigidity, bradykinesia, and tremor.**

Manuel Glauco Carbone & Icro Maremmani (2024) Chronic Cocaine Use and Parkinson's Disease: An Interpretative Model

Impact of SUD on PD treatment

- Alcohol Increased GABAergic transmission leading to tremor, worsening of tardive dyskinesia
- Used to self medicate anxiety & depression.

Addiction to dopaminergic therapies

- The “dopamine dysregulation syndrome” (or DDS, formerly known as “hedonistic homeostatic dysregulation syndrome”) is a neuropsychiatric behavioral syndrome thought to occur in ~4% of treated PD patients
- Consume excessive amounts of leva-dopa, may seek multiple sources of medication (prescriptions from different physicians and online)
- Hypomania, psychosis, and violent levodopa-induced dyskinesias and often have a profound impact on social and occupational functioning
- Disabling neuropsychiatric complication of dopaminergic therapy in PD, some patients with DDS may have a previous mood disorder, as well as history of heavy alcohol consumption and illegal drug use.
- hypomania, psychosis, and violent levodopa-induced dyskinesias and often have a profound impact on social and occupational functioning

Case of alcohol denial & DDS

- Ms. Copper 62 treating for grief and severe anxiety.
- Widowed, grief, adult stepchildren did not like her, social anxiety, no friends.
- Neighbor BPAD got on her nerves
- Year later dx with PD
- Drank “one wine a night to relax”
- Came into office smelling of alcohol, confronted, agreed to admission. Hated hospital (had to share a room). MD said one wine at lunch was ok.
- Developed paranoia, hypomania and became unkept. Running out of her levadopa admitted to taking more than prescribed. Educated and appreciated info.
- Missed appointment called for welfare check, angry that neighbors saw police at her door & d/c therapy.

Challenges for caregivers

- **Impulse control disorders** (ICDs) may develop in patients with Parkinson's disease Punding was the most frequent behavioral problem (57%), 42% exhibited aggressive hypersexuality, 27% compulsive eating, 24% pathologic shopping, and 21% compulsive medication.

Gülay Kenangil, Sibel Ozekmekçi, Melis Sohtaoglu & Ethem Erginöz (2010). Compulsive behaviors in patients with Parkinson's disease

Early detection

- Sleep disorder may be predictor of PD. Rapid eye movement (REM) Sleep behavior disorder (RBD)
- RBD & PD the gut good bacteria is depleted changes in fatty acids and proteins trigger nerve cells to form clumps.

Prevention & Risk Reduction

- MIND & DASH Diet (Mediterranean diet intervention for neurodegenerative delay & diet and dietary approach to stop hypertension). Reduces oxidative stress and inflammation which are biological mechanisms in dementia and may slow cognitive decline.
- Moderate to vigorous exercise = lower risk of PD
- Low Vit D associated with higher risk of PD
- Learn new skills, use non-dominant hand, socialize, meditate, boxing, ping pong, tai chi, yoga and brain games.
- Limit alcohol, stop smoking avoid exposure to toxins

End of life care in PD

- Severe debilitating symptoms: Sleep problems, hallucinations, confused, depressed, anxious, hostile.
- Bradykinesa & freezing, speech decline, falls, dysphagia, dementia, psychosis, urinary problems, constipation, dehydration, aspiration pneumonia, pressure ulcers, infections (UTI's).
- Skilled Nursing Facilities (SNFs)
- Hospice:

  Two criteria to be eligible:

  - 1. nutritional impairment (unable to get calorie intake, continue to lose weight, dehydration, refuse artificial feeding)
  - 2. rapid progression (bedridden, unintelligible speech, major assistance with activities of daily living (ADL's), need at best pureed diet.

References & Resources

- Davis Phinney Foundation (educational resources, books for caregivers)
- Michael J. Fox Foundation for Parkinson's Research
- Parkinson's Foundation network, Global Care Network
- American Parkinsons Disease Association (educational webinars, support groups and online classes, tai chi, yoga & sitting exercises. Clinical trials.)
- Andres Deik, Rachel Saunders-Pullman, Marta San Luciano (2012) Substance of abuse and movement disorders: complex interactions and comorbidities
- Manuel Glauco Carbone & Icro Maremmani (2024) Chronic Cocaine Use and Parkinson's Disease: An Interpretative Model
- Gülay Kenangil, Sibel Ozekmekçi, Melis Sohtaoglu & Ethem Erginöz (2010). Compulsive behaviors in patients with Parkinson's disease