

Identifying the signs long before the disease is diagnosed could lead to better treatment.

THE HOLY GRAIL in any progressive disease is to find it early enough to start effective treatment before irreversible damage has occurred. For Parkinson's disease, which afflicts 1.5 million Americans and growing, a new study has brought this goal a little closer.

The study, conducted among more than 54,000 British men and women, identified symptoms that were more likely to be present in people who years later were diagnosed with Parkinson's. The findings underscore the prevailing view among neurologists that the damage caused by this disease begins long before classic symptoms like tremors, rigidity and an unsteady gait develop and a definite diagnosis can be made.

The study, by Dr. Anette Schrag and her fellow neurologists at University College London, was published in *The Lancet* in January. As many as five years before a diagnosis of Parkinson's, those who developed it were more likely to have experienced tremor, balance problems, constipation, low blood pressure, dizziness, erectile and urinary dysfunction, fatigue, depression and anxiety.

In addition, Dr. Claire Henchcliffe, director of the Parkinson's Disease and Movement Disorders Institute at Weill Cornell Medical Center, said REM sleep behavior disorder characterized by a tendency to act out one's dreams while asleep, was one of the strongest prediagnostic symptoms, along with a lost sense of smell and subtle changes in cognition.

Manifestations of Parkinson's Disease

Key Motor Symptoms: Rigid Extremities, Resting Tremors, and Festinating Gait

Introduction

Parkinson's Disease (PD) is a progressive neurodegenerative disorder primarily affecting motor function. Its clinical manifestations result from the loss of dopaminergic neurons in the substantia nigra region of the brain. Among its hallmark motor symptoms are rigid extremities, resting tremors, and festinating gait. Below is a detailed overview of these manifestations, supported by complete references.

Rigid Extremities

Rigidity in Parkinson's Disease refers to increased muscle tone leading to stiffness and resistance to movement in the limbs and trunk. This symptom often presents as "cogwheel rigidity," in which the resistance to passive movement is interrupted by intermittent catches, resembling the ratcheting of a cogwheel. Rigidity can affect both flexor and extensor muscle groups and is usually present throughout the range of motion. It contributes to reduced dexterity and discomfort, often impairing activities of daily living.

References:

- Jankovic J. Parkinson's disease: clinical features and diagnosis. *J Neurol Neurosurg Psychiatry*. 2008;79(4):368-376. [URL]>
- Kalia LV, Lang AE. Parkinson's disease. *Lancet*. 2015;386(9996):896-912. [URL]>

Resting Tremors

Resting tremor is often the most recognizable symptom of Parkinson's Disease. It typically presents as a rhythmic, oscillatory movement, most commonly affecting the hands and forearms, and less frequently the jaw, chin, lips, or legs. The tremor is most prominent when the affected limb is at rest and tends to diminish with purposeful movement or during sleep. A classic sign is the "pill-rolling" tremor, where the thumb and forefinger move in a circular motion, as if rolling a small object.

References:

- Poewe W, Seppi K, Tanner CM, et al. Parkinson disease. *Nat Rev Dis Primers*. 2017;3:17013. [URL]>

- Jankovic J. Parkinson's disease: clinical features and diagnosis. *J Neurol Neurosurg Psychiatry*. 2008;79(4):368-376.

Festinating Gait

Festinating gait is a distinctive walking pattern seen in advanced Parkinson's Disease. It is characterized by short, shuffling steps that progressively become more rapid and less controlled, giving the appearance that the patient is chasing their center of gravity. This gait often includes difficulty initiating movement (start hesitation) and may be accompanied by episodes of "freezing," where the patient temporarily feels glued to the floor. Festinating gait increases the risk of falls and significantly impacts mobility and independence.

References:

- Bloem BR, Hausdorff JM, Visser JE, Giladi N. Falls and freezing of gait in Parkinson's disease: A review of two interconnected, episodic phenomena. *Mov Disord*. 2004;19(8):871-884. [URL]>
- Kalia LV, Lang AE. Parkinson's disease. *Lancet*. 2015;386(9996):896-912.

Conclusion

Rigid extremities, resting tremors, and festinating gait are among the core motor manifestations of Parkinson's Disease. Awareness and recognition of these symptoms are critical for early diagnosis, management, and improving the quality of life for individuals affected by this condition.