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A Review on Parkinson's Disease

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Abstract: *Parkinson's disease (PD) is a progressive neurodegenerative disorder that primarily affects movement control due to the loss of dopaminergic neurons in the substantia nigra region of the brain. It is characterized by tremors, muscle rigidity, bradykinesia (slowness of movement), and postural instability. Although the exact cause remains unclear, genetic factors, environmental toxins, and oxidative stress are known to contribute to its onset. Currently, there is no cure for Parkinson's disease, but various pharmacological treatments, including levodopa, dopamine agonists, and MAO-B inhibitors, aim to manage symptoms and improve quality of life. Non-pharmacological therapies such as physiotherapy, deep brain stimulation (DBS), and lifestyle modifications also play a significant role in disease management. Ongoing research is exploring new therapeutic strategies, including neuroprotective agents, gene therapy, and stem cell transplantation. This paper provides a comprehensive overview of the pathophysiology, clinical features, diagnostic approaches, and recent advances in the treatment of Parkinson's disease, highlighting the importance of multidisciplinary care in managing this complex condition.*

Keywords: Parkinson's disease, neurodegeneration, dopamine, substantia nigra, levodopa, deep brain stimulation, motor symptoms, neuroprotection, gene therapy

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