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## Triple 'P' for 'P': Fast facts, CDS regimes in parkinson's disease

James Parkinson described Parkinson's Disease (PD) in 1817 which is now recognized as one of the commonest chronic neurodegenerative disorders in the world with an annual incidence of 20 per 100,000 and up to 2% of population aged over 80. Typically, the condition leads to depletion of dopamine containing and other (serotonergic, noradrenergic) neurons leading to the clinical expression of the classic motor symptoms of bradykinesia, tremor and rigidity while non-motor symptoms such as olfactory loss, depression and dysautonomia also dominate. Dopaminergic neurons in the basal ganglia normally fire in a random but continuous manner, so that striatal dopamine concentrations are maintained at a relatively constant level. In the dopamine-depleted state, however, intermittent oral doses of levodopa induce discontinuous stimulation of striatal dopamine receptors. This pulsatile stimulation leads to molecular and physiologic changes in basal ganglia neurons and the development of motor complications. These effects are reduced or avoided when dopaminergic therapies are delivered in a more continuous and physiologic manner. Studies in primate models and patients with parkinson's disease have shown that continuous or long-acting dopaminergic agents are associated with a decreased risk of motor complications compared with short-acting dopamine agonists or Levodopa formulations. Continuous dopaminergic stimulation is a novel therapeutic strategy for the management of parkinson's disease, which proposes that dopaminergic agents that provide continuous stimulation of striatal dopamine receptors will delay or prevent the onset of Levodopa-related motor complications. Most innovative, neoteric treatment strategies that provide continuous dopaminergic stimulation can be achieved with triple 'P' treatment in the form of transdermal patch, pump and continuous infusion therapies helps to combat this debilitating and denervating illness.

### Biography

Vinod Metta got trained at Kings College Hospital, London and received higher Specialist training in Neurology and Movement Disorders at Imperial College, University College London, Queen Square Hospitals, UK. He was awarded with prestigious Doctorate award for his research exploring pathophysiology and treatment options of disabling non-motor symptoms fatigue and sleep in patients with parkinson's disease, in collaboration with Kings and Imperial College London. He is also a Recipient of prestigious Joint British Neurology and Australian and New Zealand Association of Neurologists 2016 Fellowship award. He has authored and co-authored several papers published in high impact factor journals like prestigious Brain Journal and several book chapters in iconic *Oxford Textbook of Clinical Medicine* (5th and 6th editions) and his recent book on hidden face of Parkinson's disease reached celestial heights. He has special interest in exploring and pioneering biomarkers to investigate pathophysiology and treatment models in neurodegenerative disorders.

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