Understanding the movement disorder associated with Parkinson’s disease and suggestions for therapeutic intervention: A theoretical model

Currently there is no sufficient information how dopamine interacts at the basal ganglia and controls refining of movements for execution by the cerebral cortex. This paper will introduce the physiological and mechanical events that may happen due to lack of dopamine release by the substantia nigra and influence of subthalamic nuclei. This model may help therapy specialists to develop appropriate physical activities for a patient with Parkinson’s disease. A summary of several therapeutic activity models will be discussed. Basic anatomy, physiological events, mechanical events, and therapeutic approaches will be discussed to control rigidity, spasticity, initiation of movements, control of postural muscles, and improve balance of patient’s with Parkinson’s disease.

Biography

Anand Shetty is a Professor in the Department of Physical Therapy at the University of St. Mary. He is also the Co-Director of Research in the Department. Currently, he teaches Anatomy, Exercise Physiology and a series of research courses. He has received his Doctoral degree in Physical Education from the University of Northern Colorado. He has published and presented numerous articles on obesity and a frequent invited speaker on obesity and nutrition. He has more than 25 years of teaching and research experience.

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