

Functional Neuroanatomy for Basal Ganglia

Bhaskaran Sathyapriya, Chandrakala B, Govindarajan Sumathy,

Abstract

The "basal ganglia" refers to a group of subcortical nuclei responsible primarily for motor control, as well as other roles such as motor learning, executive functions and behaviors, and emotions. Proposed more than two decades ago, the classical basal ganglia model shows how information flows through the basal ganglia back to the cortex through two pathways with opposing effects for the proper execution of movement. Although much of the model has remained, the model has been modified and amplified with the emergence of new data. Furthermore, parallel circuits subserve the other functions of the basal ganglia engaging associative and limbic territories. Disruption of the basal ganglia network forms the basis for several movement disorders. This article provides a comprehensive account of basal ganglia functional anatomy and chemistry and the major pathophysiological changes underlying disorders of movement. In the following article we discuss about the basal ganglia, their components and working functions.

: