The neural circuitry of executive functions in Parkinson’s disease

https://neurodegenerationresearch.eu/survey/the-neural-circuitry-of-executive-functions-in-parkinsons-disease/

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The neural circuitry of executive functions in Parkinson's disease

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5

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Research Abstract
Parkinson’s Disease (PD) is the second most common neurodegenerative disorder. Current therapies for PD predominantly focus on relieving the motor deficits of the disease. However, many other non-motor symptoms of PD are not effectively managed by current therapies, a problem which is almost certainly due to the fact that the disease extends well beyond the nigrostriatal system. Among these non-motor symptoms, cognitive deficits have a significant impact on the quality of life and day to day activities of these patients. The main pattern of cognitive impairments seen in early stages of PD resembles that produced by frontal lobe damage and includes deficits of executive functions. The impairments in executive functions that characterize non-demented PD patients include deficits in planning and lost ability to alter a

behavioral response in the face of a changing environment. Today, the possibility of investigating the contribution of cortical and subcortical areas, in vivo, in the human brain by using functional imaging provides us with a valuable probe of brain function that is unparalleled in its ability to study and dissect the prefrontal-striatal loops in awake behaving subjects. Using positron emission tomography (PET), the proposed studies are designed to explore in non-demented PD patients the relationship between executive deficits and dopaminergic receptor abnormalities in the striatum and prefrontal cortex.

Further information available at:

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