

Attentional set-shifting is the ability to switch attention between two tasks “handled” by independent information-processing mechanisms. It remains an essential aspect of cognitive functioning because it enables adjustment of our reactions to changing circumstances. The greater the ease of switching between tasks or events, the easier it is for a person to adapt to changes in the environment. In PD, this cognitive flexibility often significantly deteriorates, which is related, at least in part, to an impaired attentional set-shifting mechanism. It is hypothesized that the latter is influenced by the phenomenon of learned irrelevance (LI). LI is described as a difficulty in shifting attention to something that was previously insignificant. Until now, this phenomenon has not been well-understood in humans, but it turns out that patients with PD are more susceptible when compared with the general population. This project examines LI in PD, aiming to answer questions regarding the neurochemical basis of this phenomenon (whether related to dopaminergic or cholinergic activity), as well as the relationship with patients' quality of life and disease symptoms. Obtaining answers to these questions will significantly expand our knowledge of cognitive disorders in PD. Investigating this type of deficit in PD is important because until recently, the clinical picture of PD focused almost exclusively on motor symptoms. Increasing the effectiveness of treating these symptoms extends patients' lives, but the risk of non-motor deficits increases in importance with the chronicity of the disease. Cognitive disorders are challenging to treat in PD, exert a negative effect on the course of the disease, and significantly shorten patient survival. Therefore, the clinical implications of such studies are essential from a social perspective, as PD is the second most common neurodegenerative disorder after Alzheimer's disease. Moreover, with the aging of the general population, this problem will rise in importance.