Parkinson’s Disease (PD) is not just a movement disorder. In addition to tremors, problems with gait, balance, and muscular rigidity, patients also develop cognitive impairments that involve slow mental processing speed, working memory deficits, and impairments in executive functioning. These deficits are generally not responsive to current pharmacological interventions (Seppi, et al., 2011). Individuals who experience these types of cognitive difficulties when they are first diagnosed are likely to develop dementia 80% of the time (Weintraub, et al., 2015).

A recent meta-analysis by Leung, et al. (2015), published in Neurology, found evidence that cognitive training was effective for improving working memory, mental processing speed and executive functioning in patients with PD. While these research findings were limited to a small number of studies, this systematic review provided promising evidence that for some people with PD, cognitive training has the potential to improve their cognitive functioning, and that at least some patients are likely to benefit from this therapy. Many research questions in this area remain unanswered, including the effectiveness of cognitive training for people with more severe cognitive symptoms of PD, the potential impact of cognitive training for improving activities of daily living, whether early intervention is the best approach, recommendations for the intensity and frequency of the implementation of cognitive rehabilitation therapy, and how to best target cognitive training for the various sub-groups of the PD population.

In summary, these research findings suggest that health care professionals consider providing cognitive rehabilitation services as part of their comprehensive treatment plan.

For more information about this research and studies, click here.

References


Improving balance for Parkinson’s patients using Neurofeedback

Research completed at the University of Mashad evaluated the benefit of neurofeedback training in helping patients with Parkinson’s Disease (PD) improve balance. These researchers found a significant improvement in balancing ability for the treatment group compared to a control group in only eight sessions.

PD subjects were randomly divided into experimental and control groups, and only the experimental group received neurofeedback. The researchers assessed pre and post-test measures of both static and dynamic balance using the Biodex and Berg scales. The measures of balance did not differ significantly between the experimental and control groups at the beginning of the study. After the experimental group completed neurofeedback therapy, both groups were retested. The control group had an overall improvement of 11% in their balancing abilities. The experimental treatment group had an average improvement of 145%, as measured by the changes in the balance scales. The neurofeedback training protocol was comprised of up-training Beta1 (15-18 Hz) and down-training Theta (4-8 Hz). The researchers concluded that neurofeedback training was clinically effective in reducing the balance problems that almost always occur for patients with PD.

For more information about this research, click here.

Learn about the Biodex Scale here.

Info about using the Berg Scale is here.