

## Yoga in the Management of Parkinson's Disease: An Update

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Parkinson's disease (PD) is a progressive neurodegenerative disorder that has both motor and non-motor symptoms. In the modern lifestyle, several risk factors exist for Parkinson's disease. Some are stress, obesity, pesticides, and excess use of certain dairy products. Yoga is reported to improve both motor and non-motor symptoms in patients with PD and contributes to the improvement of their quality of life.<sup>5</sup> There is a need for more clinical trials to be conducted in this area to introduce yoga as an effective therapy in the management of Parkinson's disease.

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### Dear Editor,

Parkinson's disease (PD) is a progressive neurodegenerative disorder that has both motor and non-motor symptoms. In the modern lifestyle, several risk factors exist for Parkinson's disease. Some are stress, obesity, pesticides, and excess use of certain dairy products. Stress is unavoidable but at the same time, excessive stress must be managed effectively. Psychological (non-motor) symptoms of PD include excess anxiety in patients with PD. About 50% of patients with PD experience anxiety. However, the protective factors are changes in the lifestyle like including physical activity in the daily schedule. The physical activity includes running, dancing, martial arts, yoga, etc. Physical activity can alleviate the symptoms of PD by reducing the accumulation of the alpha syn protein, inflammation, and oxidative stress. Physical activity also enhances the activity of BDNF, promotes

nerve regeneration, and maintains the functional status of the mitochondria. It has been explained that alternative and complementary therapies, like yoga, Tai Chi, etc, can be practiced along with the conventional treatment. These therapies promote the action of conventional therapy. Complementary therapies can manage both motor and non-motor symptoms. Yoga is one such therapy that offers multiple beneficial effects, provided it should be practiced on a long-term basis. The importance of yoga is recognized worldwide and every state promotes the practice of yoga for all age groups. Yoga is also being used in the clinical setting to manage various disease conditions like anxiety, depression, insomnia, cognitive disorders, etc. Yoga is a simple and cost-effective therapy that has no side effects and can be incorporated easily into the routine day lifestyle.

Interestingly, tele-yoga intervention was proved to be effective in the management of PD. Mobility, mood, sleep, and quality of life were improved, followed by the yoga practice in PD patients. Yoga reduces anxiety and depression and offers relaxation. This relaxed psychological state boosts the action of conventional medicines. The conventional medication for PD is dopaminergic drugs. However, therapies like deep

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brain stimulation, and gene therapy also have equal importance. Yoga practice is reported to improve balance and reduce self-reported falls in PD patients. Earlier studies reported that yoga can improve motor symptoms in Parkinson's patients and help them to be independent in their daily lives. This could improve their quality of life.<sup>1</sup> Ashtanga yoga, in particular, improved muscle strength also along with the management of dyskinesia in patients with Parkinson's disease.<sup>2</sup> Similarly, correcting the gait and balance is most important in the management of PD. Hatha yoga was reported to be beneficial in improving the gait and balance in patients with PD.<sup>3</sup> In fact, yoga improves not only the physical health but also the mental health of the individual.<sup>4</sup> However, the yoga designed for PD patients has to be simplified as they can't practice all the asanas due to motor defects. At the same time age factor also has to be considered while designing yoga for PD patients. Further, PD patients have to practice yoga under the supervision of an expert or their trained family member. However, to date no adverse effect was reported from the individuals who followed yoga as per the literature.<sup>5</sup> Yoga is reported to improve both motor

and non-motor symptoms in patients with PD and contributes to the improvement of their quality of life.<sup>5</sup> There is a need for more clinical trials to be conducted in this area to introduce yoga as an effective therapy in the management of Parkinson's disease.

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