

Mini Review

A Holistic Approach for Living Well with Parkinson's Disease

Shanthipriya Siva*

Saar Foundation, Chennai, India

Corresponding author: Dr. Shanthipriya Siva, Founder, Saar Foundation, Chennai, India, E-mail: shanthipriyadr@gmail.com

Received: 13-Dec-2021, Manuscript No. JADP-21-12827; Editor assigned: 15-Jan-2022, PreQC No. JADP-21-12827 (PQ); Reviewed: 29-Jan-2022, QC No. JADP-21-12827; Revised: 2-Feb-2022, Manuscript No. JADP-21-12827 (R); Published: 9-Feb-2022, DOI: 10.4172/2161-0460.1000530.

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Abstract

Parkinson's disease, or simply Parkinson's, is a chronic degenerative disorder of the central nervous system that mainly affects the motor system. As the disease worsens, non-motor symptoms become more common. The symptoms usually emerge slowly. Early in the disease, the most obvious symptoms are shaking, rigidity, slowness of movement, and difficulty with walking. Thinking and behavioural problems may also occur. Dementia becomes common in the advanced stages of the disease. Depression and anxiety are also common, occurring in more than a third of people with Parkinson's disease. Other symptoms include sensory, sleep, and emotional problems. Medical management is the mainstay treatment but along with medications we need to incorporate complementary therapies to improve the quality of life. Once diagnosed we need to adopt certain lifestyle changes to live well with Parkinson's.

Introduction

A person with Parkinson's face many challenges. Every individual has a unique game plan for living with Parkinson's. Once diagnosed, we need to accept the condition and work towards how to live well with Parkinson's.

"Radical Acceptance" which is defined, simply as living in the reality of the present as painful or unwelcome as it may be. Different than the typical understanding of acceptance as approval, radical acceptance encourages one to reduce suffering and move towards a problem solving approach [1].

The best medicine is hope, keep hoping. Every day is a reason to hope.

Exercise and Sports

Exercises help in early and mid-stage Parkinson's. It improves flexibility, balance and Neuro plasticity. What type of exercises is the question. Lot of studies say different types of exercises offers different benefits but endurance programs offer the greatest long term benefits. So whether high intensity workout or simple work outs one has to be consistent and studies say more than 150 minutes a week of exercise delays progression, improves cognitive function in a person with Parkinson's [2]. Studies show HIIT enhances the growth and function of nerves. End of study patients had less rigidity and stiffness, improved balance, improved cognitive function and general wellbeing in both young and the older patients [3].

Basketball is a social sport that builds community on and off court. There are various repetitive actions, dual tasking (thinking about next move, verbal commands) improved balance and gait mental function heart healthy strengthens muscle increase endurance and torches calories. Table tennis is an aerobic exercise which in general improved hand eye coordination sharpens reflexes and stimulates the brain. A study demonstrated significant improvement in speech, handwriting, getting dressed, getting out of bed, walking in people with Parkinson's. It also showed improvement in facial expressions, posture, rigidity, bradykinesia and tremors. A study shows non-contact boxing improves not only motor symptoms but non motor too such as fatigue, depression, anxiety and a better quality of life. A total body workout it tests balance, agility, hand eye coordination all that can be affected in Parkinson's. It can improve muscle strength, speech (yelling, grunting) and improves social activity [4].

A study in lancet neurology showed that riding on an indoor bike 3 times a week significantly decreased Parkinson's symptoms [5]. In early stages as it is as effective as medicine. In the study people who pedalled at high rate of speed for 40 minutes 3 times week 35% reduction in symptoms and also improvement in heart, lungs that causes death in Parkinson's. The researchers stressed that the connection between aerobic exercise and reduction in symptom in Parkinson's is poorly understood, but exercise creates an optimal environment in the brain- activating immune system and improve function of power producing mitochondria in cells.

Movement and Mindfulness

A balance based meditation in motion exercise that consists of gentle, rhythmic, flowing movements that improve balance and flexibility. It involves deep breathing and there's little stress on joints muscles, so suitable for all age groups, in a study published in 2012, showed people who practiced Taiichi twice a week for 60 minutes were more flexible, were able to bend without losing balance or falling, able to take longer strides while walking and experienced less dyskinesia [6]. There was improvement in cognition, attention, working memory. In general, it improved the quality of life. It is beneficial to Parkinson's as it reconnects the mind and body which helps to focus, create new neural connections and the body moves with ease to discover inner joy and happiness.

Argentine tango helpful for improving balance and functional mobility in patients with Parkinson's disease. As tango requires specific steps that involves rhythmic walking forward and backward it is helpful for freezing and gait difficulties and preventing backward falls. Tango requires working memory, control of attention and multitasking to incorporate new and old dance movements. To many Parkinson's disease patients traditional exercise programs are unappealing. The connection between music and dopamine systems in the brain establishes and maintains the behaviour improving mood and cognition. The social interaction and support in tango have positive results in mood and compliance. A study revealed the feasibility and safety for mild to moderately severe Parkinson's disease.

Yoga and pranayama are one of the most beneficial complementary therapies for Parkinson's increasing the flexibility, improve posture loosens tight, painful muscles, builds confidence thus enhancing the quality of life. The neuromuscular system is immensely benefited and motor functions are developed. Seated and assisted postures for those with limited mobility and feelings of uneasiness. Asanas that strengthen core and posture like "utkatsana" (chair pose) modified "navasana" (boat pose) "salabhasana" (locust) are beneficial. Yoga starts with breath. Controlling breath helps in moments of panic such as freezing.

Several studies have shown connection between Parkinson's symptoms and mindful meditation. It improves cognitive and motor function and patients have less stress and depression. A decrease in tremors was noted too.

Creativity and Manual

Parkinson's causes visuospatial dysfunction. The cause is unknown. Art helps in hand eye coordination, perception of objects thus improving visuospatial dysfunction. Research studies have looked at clay as an art material because of its interactive use and effects on manual dexterity [7]. Art therapy helps to restore functional independence and improve quality of life for people with Parkinson's disease. The benefits are increased pleasure, improved motor control, sense of individuality, mind-body connection and strengthening. Music therapy helps in balance- stride length, posture and side to side movement. Communication - singing increases volume articulation and swallowing. Humming exercises can relax tense vocal cords.

Acupuncture has been used as a complementary therapy in Parkinson's disease. Few studies claims it improves tremor, sleep, decrease drug dosage and drug side effects. However evidence to support acupuncture for Parkinson's disease remains unclear. This can relieve muscle stiffness and rigidity in Parkinson's disease. It can be invigorating and stimulating to mind and body thus reducing stress, anxiety, pain, constipation quality of sleep and overall sense of wellbeing. This therapy is done under guided supervision of a Neurophysiotherapist.

This helps in Parkinson's due to

1. The waters buoyancy can support weak muscles and allow limbs to move in less painful manner.

- 2. The resistance of water helps to strengthen muscles.
- 3. Relaxing and provide pain relief.
- 4. Being in water reduces fear of falling feel safer.
- Nutrition and Parkinson's

There is no specific or prescribed diet for Parkinson's disease but eating healthy and balanced nutrition helps to ease or improve symptoms. Eating frequent and small meals, including dark leafy vegetables, high fibre foods, legumes, whole grains and cereals, foods rich in prebiotic and probiotic helps to maintain regular bowel movements. Including nuts and seeds, healthy fats like extra virgin olive oil helps to maintain energy levels. For people with swallowing problems diet changes might include softening food or adding foods that will stimulate swallowing (such as seasoned and sour), taking smaller bites at a slower pace helps [8].

Staying hydrated, drinking tonic water which contains quinine, including turmeric in everyday diet may prevent or reduce cramping. Levodopa to be taken 30 mins before or 60 mins after a meal is recommended as levodopa is a protein building block and reduces the drug effect.

The Mind diet focuses on 10 brain-healthy food groups: chicken, fish, green leafy vegetables, other vegetables, berries, nuts, olive oil, wine, beans and whole grains. While the MIND DIET has not exclusively been studied in Parkinson's disease, promising results have been found in Alzheimer's disease.

You can get lots of antioxidants by eating:

1. Tree nuts, like walnuts, Brazil nuts, pecans, and pistachios

2. Blueberries, blackberries, goji berries, cranberries, and elderberries

- 3. Tomatoes, peppers, eggplant, and other nightshade vegetables
- 4. Spinach and kale

Dairy products, Foods high in saturated fat are the foods to avoid. Iron supplements can decrease absorption of levodopa. If you take those, do so at least two hours before or after taking levodopa. Dopamine agonist (pramipexole, ropinirole, Rotigotine) do not require any diet adjustment. MAO-B inhibitors (Rasagiline, Selegiline) increase tyramine, and combining them with foods high in tyramineusually aged cheese and cured meats could raise blood pressure. These foods don't need to be eliminated from the diet altogether, but should be eaten in moderation.

Support Groups

Many people find that support groups help them cope with the dayto-day realities of having Parkinson's disease.

Benefits of support groups:

- 1. Education
- 2. Acceptance
- 3. Empathy
- 4. Catharsis
- 5. Hope
- 6. Self-Esteem
- 7. Empowerment
- 8. Socialization
- 9. Respite
- 10. Growth
- 11. Belonging

A person needs to find a support group that's right for them.

Conclusion

We at SAAR Foundation Chennai, Tamil Nadu, India conduct regular workshops and meetings on all the above as each person's journey of Parkinson's is unique, a person with Parkinson's should choose the right option which he/she enjoys and be consistent to improve one's quality of life. Move more, more dopamine. Shake off and move on.

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