

Measuring the Effects of Nordic Walking with Clients Living with Parkinson's Disease

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A self-reporting study was conducted at HeartSprings on 8 participants for two months from mid-July thru mid-September 2010. Clients came on Tuesday and Thursday mornings and walked anywhere from 5 minutes to 55 minutes. The class continued after walking by incorporating some upper arm strengthening exercises, usually one BIG movement (from the Lee Silverman program, and relaxation led by Jan Nelson, OTR/L, MA. Six participants went through neurologist, Dr. Harlow's, neurological motor exam. One client passed away in February 2011.

The inferences are:

1. **Anxiety decreased** in 6 out of 8 clients with no anxiety being reported in 2 clients.
2. **Balance improved** in 5 out of 8 clients. Balance stayed the same in two clients and balance decreased in one client.
3. **Energy levels improved** in 5 out of 8 clients. One client's energy levels stayed the same with no improvement. One client did not report. One client's energy levels decreased after walking.
4. **Comfort level with poles increased with use** in 5 out of 8 clients. For one client, the comfort level stayed the same being at its highest level. For two clients, comfort decreased (one due to stigma---more acceptable to use cane than Nordic poles at home).
5. **Freezing episodes while using the poles were slight to none** in 4 out of 8 clients. No freezing was experienced with or without poles in 3 out of 8 clients and one client did not report.
6. **Neurological motor exam improved** in 4 out of 6 clients by 1.0-3.5 points. One client remained stable. One client did not show any improvement. Dr. Harlow took the exams on a Thursday at the same time of the evening two months apart.

Comments from participants:

Some reported that the poles helped their **arm swing** and felt it **carried over to the following day**.

Some felt they took longer strides walking outside and that it was favorable to walking inside. "I like the fresh air and seeing the wonders of nature and landscaping and the beauty in any flower or shrub."

Some felt that the Nordic poles were trendsetters and stylish. They felt they were more acceptable than a cane or a walker. One client however felt a cane was more acceptable within his community.

"I feel better when I walk. If I sit I have no energy and I get more depressed. Then I nap more. The walking sticks have helped me with my speed and stamina. I'm sold on these sticks! I feel better as a result of exercise."

Most **felt their posture was better while using the poles** because they stood more upright than a cane or walker.

Some felt there was a timing issue with walking. If they walked too long (over 45 min.), their balance and ability to function for the rest of the day was compromised. This depended on the individual and their state of progression in the Parkinson's. Interesting to note however, that one of the individuals reported increased balance after walking by scoring though verbally reported that his balance was worse. An interesting discrepancy in perception and reporting.

Two participants used their own set of poles that were mountain trekking poles instead of Nordic walking poles. Five participants purchased the Nordic walking pole with the extra large boot tip and one participant used the Nordic walking pole and did not purchase the extra large boot tip.

The poles were slightly different in their "feet" and where they "struck" on the pavement. A trekking pole has a round flat knob at the base of the pole and grabs the pavement at the *front* of the arm swing to grab the pavement or ground if hiking to pull oneself up the mountain. The Nordic walking pole has an elongated rounded tip that looks like an actual mini-boot (these were additional extra large boot tips added to the poles which offered a broader base to grab the surface). The Nordic walking pole is designed to grab the surface of the pavement at the *back* of the arm swing and allows the participant to push back and down on the pole.

Interesting to note that one participant using the trekking poles and one participant using the Nordic walking poles both noted an improvement in arm swing while walking with the poles and that it carried over to the next day. This may infer that the type of pole does not matter as much as just using the poles themselves that stimulates the swinging of the arms in an alternating fashion.

Recommendations:

It appears that Nordic walking is an excellent addition to an exercise program providing a stable form of exercise that is stylish, acceptable and allows one to exercise outdoors to improve and/or maintain their neurological condition. It also decreases anxiety inferring that medication could be adjusted or deferred when clients start are on a regular exercise program.