

Findings from a Ph.D. Dissertation on the UPPERTONE's Benefits.

From: *"The Impact of a Fitness Program on the Ability of Long Term Survivors of Spinal Cord Injury To Participate in Daily Living Activities,"*
Nancy Anne Morehouse, Doctoral Dissertation, 1999, UMI Dissertation Services, Ann Arbor MI, 1-800-521-0600

Introduction:

While all companies claim that their products are better than anything else, few can support their claims with the results of independently conducted studies.

We can.

In this pamphlet we present quotes and results from a recent Dissertation in Occupational Therapy on the benefits of exercising for people with quadriplegia. The study was conducted by Dr. Nancy Anne Morehouse, College of Allied Health at Nova Southeastern University.

Since this was a Ph.D. dissertation supervised by Dr. Rosalie Miller, Dr. Reba Anderson, and Dr. Barbara Kornblau of the College of Allied Health at Nova Southeastern University, it was as independent of us as you can get.

Here is what the Dissertation said:

On Why the UPPERTONE Was Used For The Study:

"The lack of equipment upon which survivors of quadriplegia could exercise independently was a major stumbling block in their participation in fitness programs. Until the invention of UPPERTONE, it was not possible for survivors of quadriplegia to exercise without being strapped onto equipment." (Page 137 of dissertation)

"While user independence is probably the most important feature of the UPPERTONE system for the user who has quadriplegia, it was not the only feature which made it ideal for this study. The choice was based on UPPERTONE's ability to exercise all the muscle groups usable by persons with C5 - 7 quadriplegia on one piece of equipment and on the elimination of the need to strap and tape and then unstrap and untape hands or wrists and trunks on the equipment." (Page 61)

The time taken to change from one exercise position to another on UPPERTONE is the same as for the non-disabled individual on most fitness equipment...." (Page 61)

What the Study Found:

"All subjects showed increases in Performance and Satisfaction scores when their post-test responses were compared with pre-test responses, which demonstrates that a three-month fitness program does have an impact on the performance of meaningful daily living activities for long-term survivors of quadriplegia." (Page 81)

"All of the subjects doubled or tripled their average of weight hefted.... Their resultant improvement in stamina and strength was evidenced by gains in their ability to participate more fully in daily activities as reported on the COPM." (Page 147)

Please Note: The COPM, or Canadian Occupational Performance Measure, is a measuring instrument used by researchers to measure how well people with quadriplegia, or other disabilities, can perform the activities of daily living needed to care for themselves as well as participate in leisure and work related activities.

"The results of this study indicate that it is possible to reverse CPD (cardiopulmonary decompensation) fatigue in some persons and postpone it for others through participation in a fitness program. All subjects doubled or tripled weight hefted and all subjects noted gains in occupational performance on the COPM." (Page 126)

"These results suggest not only the fact that CPD in long-term survivors of quadriplegia can be improved but also that people with quadriplegia can exercise independently with equipment designed for them. They can achieve a sufficient aerobic workout to safely increase exercise HR (*heart rate*) and possibly resting HR, and therefor cardiopulmonary fitness. This can enable them to participate in desired daily life activities which they had thought were lost to them." (Page 135)

Please Note: CPD (cardiopulmonary decompensation) refers to the fact that as people with quadriplegia age they fatigue very easily because of reduced heart and lung function. This greatly limits their ability to care for themselves and participate in the activities they enjoy.

What Dr. Morehouse Observed and the Quads Said:

The feeling of being able to control UPPERTONE themselves was very helpful in establishing their self-confidence." (Page 54)

"At the end of the study, CH* stated that his Performance of transfers had risen to 9 and his satisfaction with that situation was 8 (*on a scale of 1 to 10*). He no longer felt he would fall during transfers. He credited both increased strength and increased stamina for his recovery of confidence in this area." (Page 88; **The Dissertation abbreviated all names to protect people's privacy.*)

"During the post-test he stated that his performance was now 8 and his Satisfaction was likewise. "I can stay up longer without being tired." (Page 89)

"Because he was feeling stronger by month two and three, FA and his wife booked a Caribbean cruise for shortly after he completed the study. They had wanted to do this for some time, but were concerned that he could not fully enjoy it due to lack of stamina." (Page 95)

"I don't have to paste on a smile for customers any more. It's really there, he said." (Page 95)

"As mentioned earlier, FA was so enthusiastic about the exercise program, his increased stamina....., that after the program ended, he exercised three times a week on his own UPPERTONE, which was delivered to his home during his last week of participation in the study." (Page 97)

"By the end of the study he was surprised to discover that he needed only minimal assistance with bed mobility and that he could elbow prop independently." (Page 101)

"His stamina increased, his happy days now outnumbered his curmudgeon days, he was doing wheelchair pushups again without thinking about it, and his aides found him stronger and easier to maneuver in bed. One day while he was exercising the social worker came in and asked, "How is it going?" He answered "Lousy," whereupon the researcher complimented his progress to the social worker. Afterward, he said, "You shouldn't have told her that. She'll cut my services." (Page 103)

"When post-tested, MM stated that transfers were no longer a problem." No one needs to stand by my chair now..... It's a 10! In both Performance and Satisfaction." (Page 113)

"I wanted to do this study because I knew it would help me, but I didn't know it would help as much as it did he remarked." (Page 114)