

Enhancing the MOVE Initiative: A More Effective Mobility Program For Frail Elderly who can Stand and Walk

In the first Education Note addressing the MOVE (Mobilizing Vulnerable Elders) initiative, it was suggested that, with the help of some environmental changes such as providing enabling equipment, the intervention could become more effective and should achieve or exceed the clinical and fiscal purposes that drive the MOVE initiative.

The Council of Academic Hospitals of Ontario (CAHO) launched the MOVE (Mobility of Vulnerable Elders) project in 2011 to assess the effect of having health care aides prompt residents several times per day to repeat the sit-to-stand activity and to measure the effects of this simple intervention on the mobility, function and health-related quality of life of Long Term Care (LTC) residents with dementia. The project scope was later expanded to include hospitalized elderly.

The preliminary research clearly demonstrated that increased walking (in those who could walk) and sit-to-stand activities (in those who could not yet walk) can slow down the typical physical deterioration seen in residents/patients in LTC facilities and Hospitals. It would not be unreasonable to expect that a similar program could also improve the mobility and associated health of residents in post-acute, assisted living or even in retirement settings.

While increasing the level of mobility in elderly who can already move – be it walking more or increased practice standing up – is effective and practical, the point I would like to emphasize in this Education Note is that it could be even more so. Such improvements are possible by increasing the reach of the program to include residents who would otherwise not be considered ‘suitable’, and by enhancing the effectiveness through including more effective exercises.

Increase the Reach of a Mobilization Program

Expanding a mobilization program to include many who otherwise would not be able to stand and walk safely is possible when enabling equipment is used. For example, the **Sit-to-Stand Trainer (Figure 1)** is a mobile tool that can easily be moved to the bedside to allow safe, active training exercises that will strengthen a resident’s lower limbs and torso and safely progress their independent standing ability. Residents who might otherwise be considered too weak to participate in standing exercises, could therefore be included in this aspect of a mobilization program.



Figure 1: Active standing practice, even in very frail individuals, is enabled with the NeuroGym® Sit-to-Stand Trainer.

There is always a tension between promoting mobility and preventing falls in the hospital, as there is in any setting when working with vulnerable elders. However, with tools such as the **Bungee Mobility Trainer (BMT)**, more typically ‘unsafe’ elderly can now become safe to mobilize. For example, a resident who might otherwise need to be assisted by two people to safely practice walking, could, in the BMT, participate in a safe walking program with the assistance of only one rehab aide. This allows the mobility program to have a vastly more effective reach and can have significant effects on a resident’s functional abilities.

Enhance the Effectiveness of a Mobilization Program

The goal of programs like the MOVE initiative is to improve the function of the elderly individual – be it standing or gait. Increasing the number of times that the standing motion is practiced, or increasing the number of minutes walked is helpful. The degree of improvement, however, can be much greater if these exercises are enhanced with the addition of simple tools that increase the intensity with which an exercise is practiced or the breadth of exercises that can be safely conducted. The NeuroGym® Sit-to-Stand trainer is not only designed to allow very weak persons to safely practice and regain that critical skill, it also allows a variety of standing exercises to

be conducted with only one aide, such that better lower limb strength and standing stability can be achieved. Likewise, the NeuroGym® Bungee Mobility Trainer makes it possible to enrich a simple walking program such that balance-challenging activities can be included. This can be accomplished very safely with only one aide and permits 'real-world' practice of both gait and balance activities. For example, sideways mobility (protective stepping), balance and strength exercises can all be practiced safely and easily. This type of versatile mobility training, rather than just a walking routine, will help improve functional abilities.

As for strength and motor control, key building blocks to stable standing and gait, enabling tools like the NeuroGym® Sit-to-Stand Trainer, Exercise Wheelchair (Figure 2a & 2b), Ankle Trainer and Pendulum Stepper can complement various strength training machines and lead to a degree of functional improvement in standing and walking that would exceed the improvement expected with walking alone. To better understand that concept, we only need to re-visit principles of high level athletic training; one cannot expect an elite runner to get better with running alone – many more hours at the gym, that include strength, stability and control training, are used in combination with actual running to achieve optimal progress.



Fig.2a



Fig.2b

Figure 2: Whole body flexion (a) and extension (b) exercises with the NeuroGym® Exercise Wheelchair are an excellent way to effectively strengthen the back, hip and knees in wheelchair-bound individuals.

The next note in this Education series will discuss more effective ways to improve the function in vulnerable elders who cannot stand. It should further demonstrate the significance of enabled mobility. Without the enablement aspect, we are left with training options that are far less effective at reaching the functional improvement we seek to achieve in the more vulnerable elderly.



ABOUT OUR FOUNDER

Avi Nativ has a PhD in Kinesiology and has been a practicing physical therapist for over 20 years. He has studied and worked in neuro-rehabilitation for almost 3 decades and founded NeuroGym Technologies Inc. to bring his patented line of physical therapy 'Enabling Equipment' to rehabilitation, restorative nursing & long stay facilities.

He may be contacted at: avi@neurogymtech.com

Neurogym Technologies Inc.

100 - 1050 Morrison Drive
Ottawa, Ontario, Canada K2H 8K7

T 613-523-4148

TF 1-877-523-4148 (Canada & US)

F 613-523-4148

E sales@neurogymtech.com

www.neurogymtech.com

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