

Standing Frames Versus The NeuroGym® Sit-to-Stand Trainer: Comparing Their Effect On Changes In Quality Measures/Indicators

With the MDS-facilitated focus on improving mobility rather than subsidizing immobility, owners/managers and their service providers are now faced with the pressure of producing the kind of rehabilitation results that may not be **accepted and familiar**, but rather **effective in changing function as measured by changes in Quality Measures/Indicators (QM/I)**.

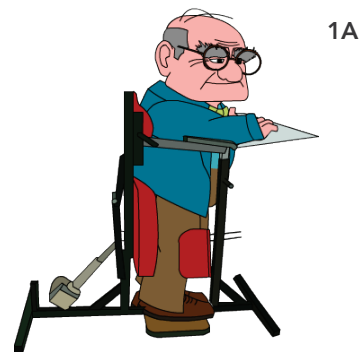
This Education Note is the first of a series describing valid and powerful new rehab solutions. In this edition, the effectiveness of standing devices as a means of progressing mobility and function will be evaluated as they relate to changes in QM/I.

Sit-Stand ability is the skill of progressing from a seated position to fully upright standing. It relies upon trunk and lower extremities strength and upon motor control. This ability is only as reliable and effective as its weakest link. By that we mean that someone is not going to be able to stand or improve a transfer (and progress to further movement) if they are unable to complete all of the 'links' in the process of standing up. These links include the initiation of standing, proper loading of the feet, progression through the full range of knee extension and, finally, achieving stability while standing.

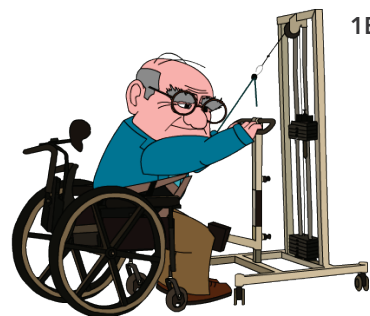
Standing Frames are a category of equipment frequently used by therapists to 'improve standing tolerance' – a term used to describe weight-bearing and the ability to remain vertical for longer periods. Increased time spent in the standing position is associated with improvements in pressure sores and continence. In the absence of a dynamic standing tool, Frames are certainly helpful when compared to non-weight-bearing routines.

What cannot be expected from using a Standing Frame, however, is the development and improvement of the ability to stand independently or improve transfers. Moreover, in a world more focused on measurable changes, facilities cannot expect to see significant functional QM/I changes as a result of time spent in a standing frame. To change someone's ability to transfer, stand up independently or perform activities of daily living (ADL), evidence suggests we use 'enabling' techniques that allow for training of the complete sequence of the standing-up movement. In addition, strengthening of weakened joints at the ankles, knees, and hips is essential to successful achievement of this skill.

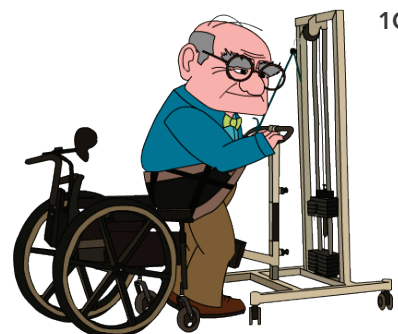
Figure 1: The passive Standing Frame (1A) does not allow practice of the essential underlying abilities necessary to progress from a seated to a standing position. The NeuroGym® Sit to Stand Trainer (1B & 1C) provides adjustable assistance so that all the underlying links necessary to actively perform the Sit-to-Stand (ie. proper weight shift and loading of the feet; progression through full range of knee and hip extension) can be practiced – even by an individual who has not stood in years.



1A



1B



1C

This is where a dynamic method of standing practice, as provided with the NeuroGym® Sit-to-Stand Trainer, pushes the envelope of functional training.

- It allows a self-initiated complete process of the standing up routine
- It creates an environment where such a routine can be repeated and varied in speed & position
- It leads to effective strengthening of the trunk and lower extremities

With regular and intensive training of the dynamic standing routine, functional progress can reach the level detected by Quality Measures/Indicators. More importantly, it can progress residents who would otherwise not ever leave the wheelchair to standing and walking and, with this, to an improved quality of life.

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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.

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