



## Parallel Bars Versus Dynamic Balance and Gait Training: Comparing Their Impact on Changes in Quality Measures/Indicators

In my previous note on rehabilitation methods that can influence Quality Measures/ Indicators (QM/I), it was pointed out that, at times, we need to trade rehabilitation methods that are accepted and familiar, for those that are more evidence-based, more effective in changing function, and therefore more positively affecting QM/I's.

In this second edition of the Education Note series on valid and powerful rehab solutions, I compare the effectiveness of gait and balance training accessories as a means of progressing mobility and function. The effectiveness of particular rehabilitation equipment and restorative programs is directly reflected in valid changes in QM/I's measured by the facility. Here I will compare the familiar and well accepted parallel bars to the NeuroGym® Bungee Mobility Trainer.

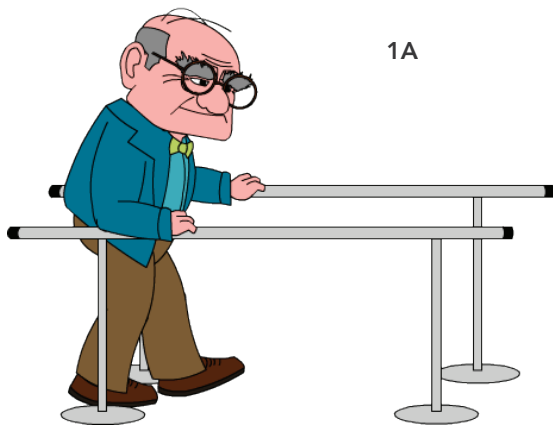
The parallel bars have, for years, been used by therapists to present an environment that provides assist for people in need of gait restoration. The assist is provided by support from the upper extremities. The parallel bars have been effective in this role and many early efforts of resuming gait have benefited from the tool. At the same time, however, therapists have had to be aware of the risks involved in such training – especially the risk of collapse, since body weight support is not typically a part of the training in parallel bars.

Modern rehabilitation of movement relies on knowledge from the field of Motor Learning. Motor Learning studies suggest that we learn best what we are able to practice

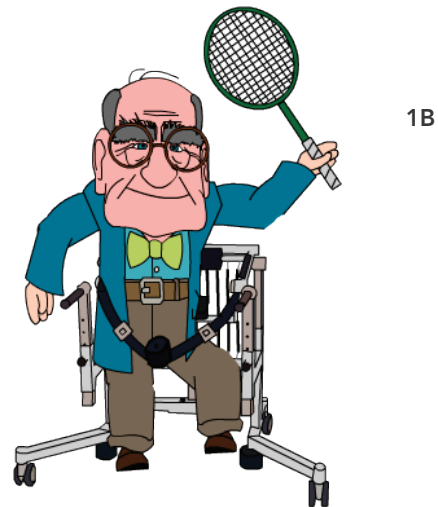
directly. In the case of a person taking steps in parallel bars, the central nervous system is involved in training forward steps but involved to a lesser degree in stability and lateral mobility. This is because the stability in parallel bars is provided by the supporting upper extremities. If one wants to provide an environment where the brain is required to control stability, one ought to look at wheeled support from below, like the Bungee Mobility Trainer. Such a tool requires the lower extremities be engaged to regain stability, but, at the same time, provides Body Weight Support (BWS) and security for both the client and the therapist. The Bungee Mobility Trainer provides graduated support from below, which allows much more natural practice of balance recovery tasks than the hanging support systems from above. These support systems from above pull the patient back to the middle upon a loss of balance. In this sense, the Bungee Mobility Trainer is more like aqua therapy, without the water. The Bungee Mobility Trainer also enables more varied training because it is not limited to a location under a ceiling track.

According to this logic, mobile training tools have a significantly higher probability of affecting a facility's MDS scores, for example QM/I's associated with Mobility and Activities of Daily Living. In fact, recent implementation of the NeuroGym® Bungee Mobility Trainer in specific mobility training at select LTPAC facilities shows exactly that – residents improving on stability and mobility scales after an interval of safe and effective mobility training.

In conclusion, the old and familiar parallel bars may be a common accessory to gait training, but they are no longer necessarily the best accessory. To improve the mobility of LTPAC patients to the extent that it shows on the 'decline-sensitive' MDS scales, one would have to employ more versatile mobility training, such as the Bungee Mobility Trainer, for optimal results.



**Fig 1. 'Gait training in the Parallel Bars'** In gait training using parallel bars, patients rely on the upper extremities for support & stability. Variability of training and more dynamic falls prevention training involving side-stepping is very limited in parallel bars.



**Fig 2. 'Gait training in the Bungee Mobility Trainer'** Due to its mobility and graduated support from underneath, the NeuroGym® Bungee Mobility Trainer allows for safe, varied, dynamic, and effective gait training. Training of protective side-stepping, so important in Falls Prevention, is easily accomplished.



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## ABOUT OUR FOUNDER

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