

# THE PENDULUM STEPPER

FUNCTIONAL TRAINING OF THE LOWER EXTREMITIES IN SITTING OR SUPINE WITH NO TRANSFER REQUIRED



The NeuroGym® Pendulum Stepper is a self-assisted trainer of reciprocal stepping designed to specifically target the antigravity muscles that are so important for maintaining balance and gait. Even in individuals with significant muscle weakness, it is designed to make improving the strength and endurance of the stepping motion simple and convenient.

Unlike other lower extremity exercisers such as cyclers, that target mainly endurance, the Pendulum Stepper is designed for improving strength, endurance, and the critically important range of motion at the hips. Minimizing the reduction in hip range of motion typically associated with less mobile individuals, is vital to improving gait mechanics and hence safety while ambulating.

In the case of very weak lower extremities, flexion and/or extension movements of the stepping action can be difficult to produce in isolation. The Pendulum Stepper allows for active assist from the user's arms or with the help of a support person by using the arm extensions. Elastic resistance may be gradually added to increase the level of difficulty and, at the same time, ease the return motion.

The Pendulum Stepper is light, mobile, and compact. Unlike larger lower extremity exercise equipment, this compact Stepper does not need to be located in a gym and it does not require transferring the user. This makes the Pendulum Stepper an ideal choice for individuals with limited mobility and for facilities with little or no dedicated exercise space.

Weighing only 40 lbs, taking up ~20" X 28" of floor space, and having wheels, the Pendulum Stepper can be easily moved from room to room. It can be positioned against a wall and it is ready for use. In this way, the crucial training of stepping in inactive or weak individuals can take place with no time-consuming transfer.

## KEY BENEFITS

- TRAINS LOWER EXTREMITY STRENGTH, ENDURANCE, AND RANGE OF MOTION
- NO TRANSFER REQUIRED
- VERY LITTLE FLOOR SPACE REQUIRED
- LIGHT WEIGHT AND EASILY WHEELED FROM ROOM TO ROOM

## CLINICAL APPLICATIONS

- Elderly: to counteract gradual weakening of lower extremity function
- Stroke/TBI/incomplete SCI: to improve range, control & strength
- Progressive, motion-affecting conditions like Multiple Sclerosis: to maintain hip & knee flexion

## TESTIMONIAL

"I am able to train my legs with ease and through a much longer range with this wonderful tool without having to transfer from my wheelchair"

*A 62 year-old woman with Multiple Sclerosis*



## IN ACTION

- In a young woman with severe brain injury, and resultant spasticity and restricted knee extension to only 90°, the Pendulum Stepper enables significant voluntary stepping motion in supine with the assistance of the therapist and/or the other limb.
- A group of seniors with reduced mobility use Pendulum Steppers together in an exercise group to increase their hip range of motion, strength, and endurance.
- A 60-year old woman with impairment of movement associated with a congenital neurological condition 'falls in love' with the Pendulum Stepper because she now can effectively exercise in sitting without pain or restrictions of motion. Moreover, she can now train effectively while at the same time, read, talk to a friend, or watch television.

### SPECIFICATIONS

#### MODEL# E-PS-A

- 20.5"W x 28.5"L x 38"H

- Weighs 40lbs

Too often physical frailty is seen as a fact of life for the elderly. Reduced strength in the lower limbs and overall weakness can lead to increased risk of falls and reduced participation in Activities of Daily Living. Until now, however, therapists, program managers, and restorative care workers have had few, if any, practical tools to change this situation. The NeuroGym Technologies unique line of mobility training devices provides rehabilitation departments, long term care, and nursing facilities with a solution.

The Pendulum Stepper is one of several mobility enabling tools manufactured by NeuroGym Technologies to promote the motor-relearning process and significantly improve patient mobility. Each piece of equipment can be used on its own or combined with a biofeedback-based computer program.



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