

Saebo Mirror Box

Product Manual



 **Saebo**
No Plateau In Sight[®]

Introduction

Saebo is pleased to introduce a simple and effective therapy tool used to treat motor dysfunction. Saebo's Mirror Box Therapy, a treatment technique first described by V.S. Ramachandran for phantom limb pain following amputation, is a form of motor imagery in which a mirror is used to process visual feedback about motor performance of the unaffected body part as it performs various movements. It is primarily used to speed up and improve motor function after stroke and other neurological disorders.

How Does It Work?

Mirror therapy is based on evidence that observation activates the same motor areas of the brain as execution. During mirror therapy, clients place their affected arm and hand inside the mirror box (to block their view of the affected side) and their unaffected hand and forearm in front of the mirror. See Figure 1.

The client is then directed to perform a movement with their unaffected hand and to simultaneously attempt to copy the movement with their hidden affected hand. The client should be looking at the image in the mirror while attempting to move the affected hand.

When looking into the mirror, the client observes the reflection of the unaffected limb positioned as the affected limb. This creates the illusion that both limbs are working normally. For example, if you put

your left hand behind a mirror and right hand in front, you can trick your brain into believing that the reflection of your right hand in the mirror is your left. You are now exercising your left hand in the brain. It is believed that this strong visual cue from the mirror can therapeutically be used to improve motor performance and the perception of the affected limb.



Figure 1

Benefits

- Improving motor function
- Reducing pain
- Reducing neglect
- Improving sensation
- Reduce spasticity

Features

- Lightweight
- Sturdy Design
- One-handed Operation
- Collapsible

Indications For Use

- Sufficient cognitive and verbal abilities to focus at least 10 minutes on the mirror reflection and follow instructions.
- Must exhibit adequate vision:
 - Client should see a clear image of the entire hand in the mirror.
 - With visuospatial neglect, clients should be able to turn their head towards the mirror image when asked to do so and keep their attention focused on the mirror image at least for 5-10 minutes.
- Sufficient balance and trunk control to sit in a wheelchair or normal chair unsupported for the duration of the treatment.
- Non-affected limb should ideally have a normal and pain-free range of motion. Severe constraints of the non-affected limb could limit execution of mirror therapy activities.

Precautions

Dizziness, nausea or sweating can be triggered in individual patient when observing the mirror reflection. If this occurs, patients should no longer look into the mirror and focus on the unaffected limb or another point in the room.

Setup

STEP 1 –

Place Saebo Mirror Box flat on the table. See Figure 2.



Figure 2

Setup (continued)

STEP 2 –

Open the Saebo Mirror Box.
See Figure 3.



Figure 3

STEP 3 –

Grab handle and lift until a triangle is formed. See Figure 4.



Figure 4

STEP 4 –

You are ready. See Figure 5.

IMPORTANT:

Before starting your first session,
remove protective film covering
the mirror.

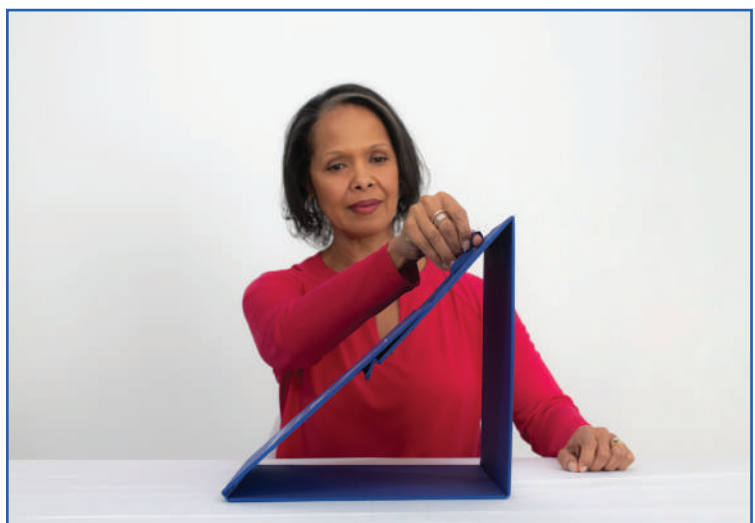


Figure 5

Setup (continued)

The Saebo Mirror Box should be positioned in front of the patient's midline, so that the affected limb is fully covered by the mirror and the reflection of the unaffected limb is completely visible. When positioning the Mirror Box, it is important for the mirror image to match the perception of the affected limb.

The affected limb should be positioned safely and comfortably behind the mirror. If the client has severe spasticity, prepositioning by a caregiver may be necessary and helpful before positioning the limb. See Figure 6.

IMPORTANT:

Jewelry should be removed from both limbs in order to facilitate an intense mirror illusion. The mirror image has to match the perception of the affected limb in order to maximize the effectiveness of the illusion.



Figure 6

Recommended Intensity

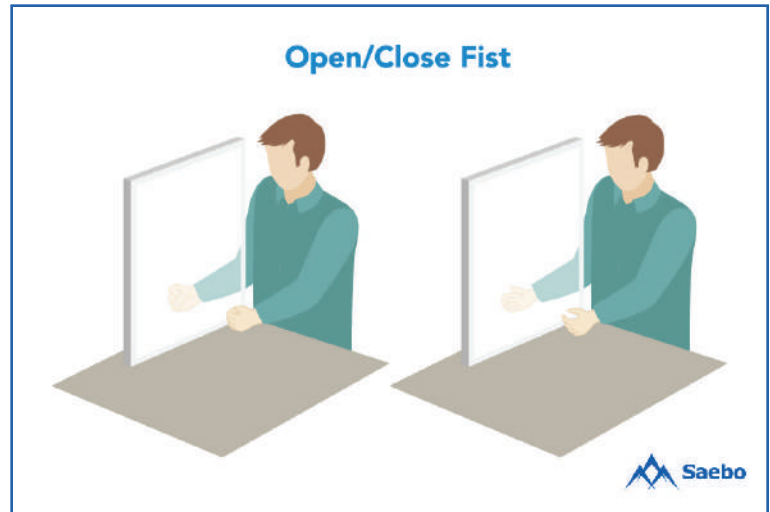
- Minimum of 30 minutes per day
- Minimum of 5 days per week

Sample Hand Exercises

10 Easy Exercises to try with clients suffering from neurological injuries such as stroke are listed below. The key is to go at a slow pace and imagine the “hand in the mirror” is truly the affected side.

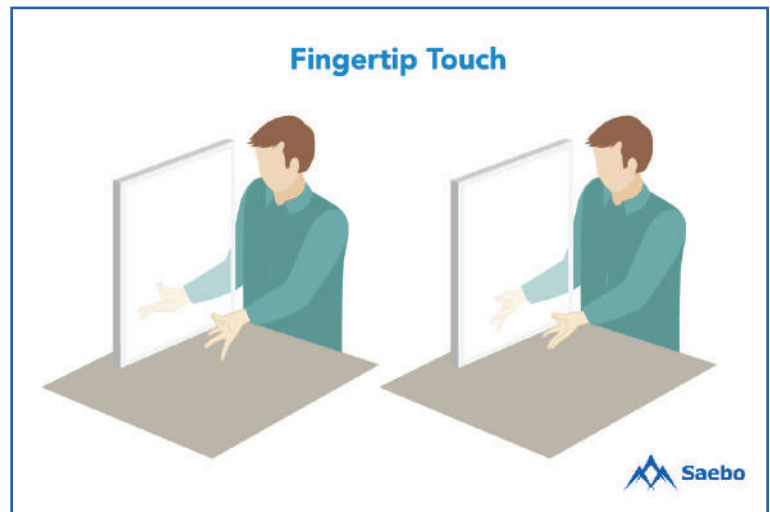
Exercise 1

Make a fist and then open your hand slowly. Repeat 3 sets of 15 reps.



Exercise 2

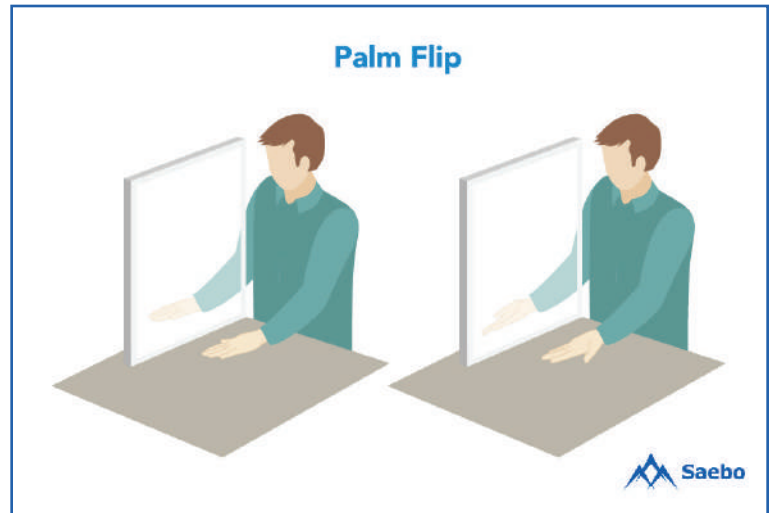
Touch your thumb to the tip of each finger. Repeat 3 sets of 15 reps for each finger.



Sample Hand Exercises (continued)

Exercise 3

Turn your palm up and down.
Repeat 3 sets of 15 reps.



Exercise 4

Pretend to play the piano, pushing each finger on the table one at a time. Continue for 2 minutes.



Exercise 5

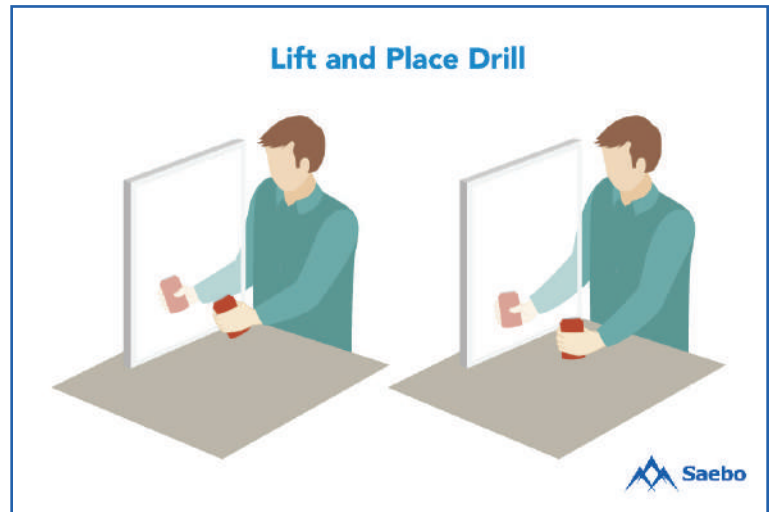
Place a washcloth on the table.
Wipe the table in a circular motion,
back and forth, and up and down for
2 minutes.



Sample Hand Exercises (continued)

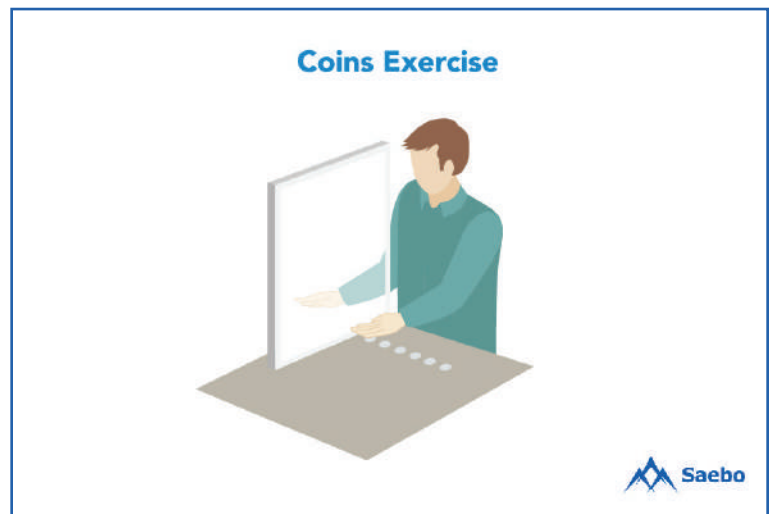
Exercise 6

Place a water bottle on the table, grasp it with your hand, lift it up 2 inches, place it back on the table and let go. Repeat 3 sets of 15 reps.



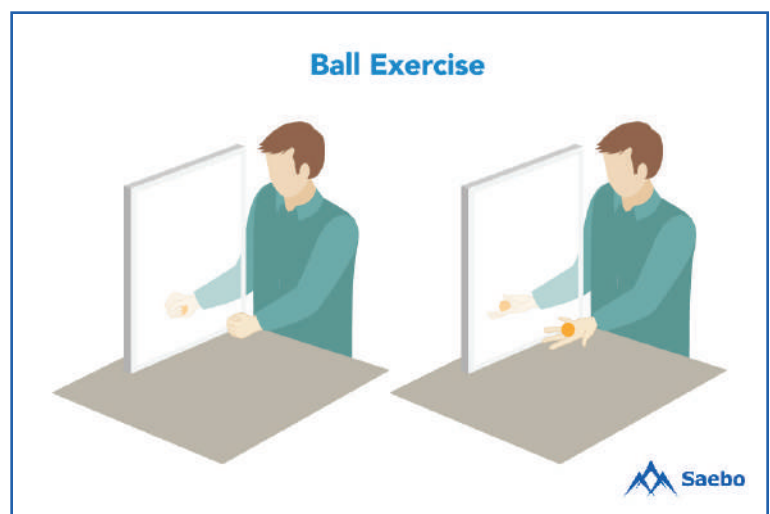
Exercise 7

Place 5 coins on the table. Pick them up one at a time until they are all in your palm. Place them back on the table, one at a time, using your thumb and your index and middle fingertips. Repeat 5 times.



Exercise 8

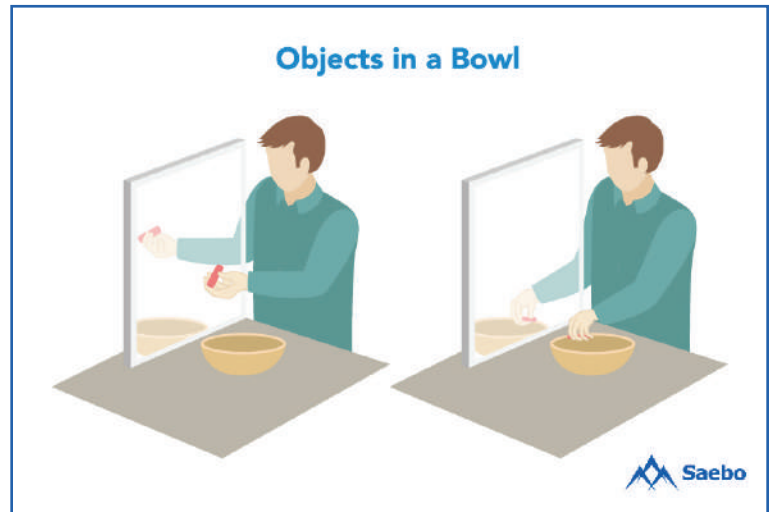
Place a foam ball on the table. Pick up the ball, squeeze it and place back down on the table and let go. Repeat 3 sets of 15 reps.



Sample Hand Exercises (continued)

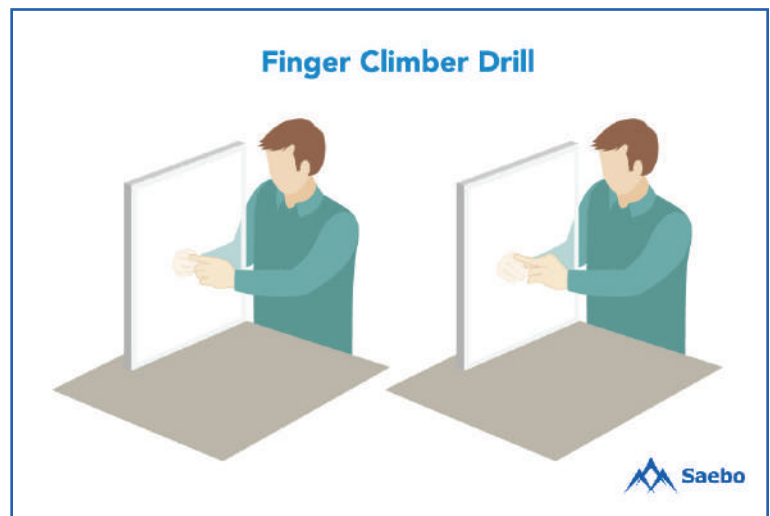
Exercise 9

Place 20 small objects (marbles, poker chips, blocks) on the table. Position a bowl next to the small objects. Place the small objects, one at a time, into the bowl. Repeat 3 times.



Exercise 10

Crawl your fingers along the mirror in various directions (up, down, diagonally) for 2 minutes.





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