

## Restore and Strengthen: Upper Limb Rehabilitation Exercises



This brochure aims to educate you on post-stroke rehabilitation for the upper limb (shoulder, elbow, wrist and fingers).

## Introduction to post-stroke rehabilitation for upper limb

Weakness, stiffness and reduced control over the upper limb (shoulder, elbow, wrist and fingers) are commonly observed in people who had a stroke.

These motor impairments can affect basic activities of daily living (bADLs) such as wearing clothes, brushing teeth, feeding self or showering.

Therefore, we aim to improve the upper limb function to maximise independence in daily living.



The golden window for stroke rehabilitation is typically within the first 6 months post stroke. During this time, the brain is at its greatest capacity to adapt and regain the lost functions through therapy.

Hence, it is encouraged to perform upper limb exercises outside of therapy hours for strengthening and restoration of upper limb functions. This brochure will include various upper limb exercises for different motor impairments.

## Managing stiffness

To reduce stiffness over the arm and maintain joint flexibility, stretching of the arm can be done by keeping your elbow straight with palm flat on the table, and gently stretching your weaker wrist backwards using the other hand.



Maintain stretch at this position for 10 seconds

Repeat it 10 times, 3 times daily.

## Upper limb positioning

It is common for people to experience shoulder pain post-stroke. Thus, we aim to support the shoulder in an optimal position with a pillow in bed or in sitting, in order to reduce pain.



## Fine motor retraining



### Using coin

- a) Use your index finger and thumb to overturn a coin
- b) Pick up a coin and hold in the palm



### Using clothes peg

- a) Use your index finger and thumb to pinch open a peg
- b) You may also use other fingers and your thumb to pinch open a peg for strengthening



### Using tissue

- a) Tear a tissue into small pieces
- b) Use your index finger and thumb to roll and pinch it into small paper balls

## Grip strengthening



Wringing towel

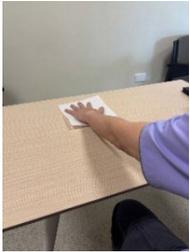


Pull and twist therapy putty



Squeezing a hand gripper

## Strengthening exercises

<p>If you are unable to raise your arm up to the ceiling:</p>	<p style="text-align: center;"><u>Wiping the table forward and backward</u></p> <p>a) Place a wet wipe in between your palm and table b) Push the wet wipe forward as far as possible c) Pull your arm back</p> <div style="display: flex; justify-content: space-around;"></div> <p style="text-align: right;">*Challenge yourself by reaching further or increasing the table height</p> <p style="text-align: center;"><u>Transferring a cup from point A to point B</u></p> <p>a) Bring a cup up from the table to the tissue box</p> <div style="display: flex; justify-content: space-around;"></div> <p style="text-align: right;">*It is important to keep your back straight and avoid lifting your shoulder during these exercises</p>
<p>If you are unable to bend/straighten your elbow fully:</p>	<p style="text-align: center;"><u>Wiping table</u></p> <p>a) Support your elbow and forearm on the table b) Bring your hand towards yourself by bending your elbow. Ensure that your forearm remains on the table c) Straighten your elbow and return it back to the starting position</p> <div style="display: flex; justify-content: space-around;"></div>

# Coordination practice

<p>Target practice</p>	<ul style="list-style-type: none"> <li>a) Peg the clip onto the cup</li> <li>b) Slot coins into the coin box</li> <li>c) Stack the coins as high as possible</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: right;">*Challenge yourself further by placing the target further away</p>
<p>Use of both hands</p>	<ul style="list-style-type: none"> <li>a) Rolling ball back and forth between hands</li> <li>b) Throw ball in air and catch</li> <li>c) Folding clothes</li> <li>d) Buttoning</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;">    </div>

**Notes:**

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