

# Home Exercise Program for Stroke

The information provided in this handout is to help you understand the general and specific aspects regarding home exercise program.

Content of this handout is extracted from national and international stroke organizations, peer reviewed scientific research articles.

If you or your family members have questions after reading this handout, please contact your doctor and or therapist in-charge.



## Home exercises

Recovery of movement continues for a long time after stroke. Once you are home it is important to exercise and practice moving every day. With practice, movements that seem difficult at first become easier.

Home exercises is a set of exercises and activities, prescribed by your therapist for you to carry out safely at your own home with help of your family member or care giver as and when required.

The home exercise program may include such exercises and activities which may not require professional supervision. This is not to replace your regular follow up therapy sessions with your therapist.

A consistent home exercise program is one of the best ways to continue recovery after discharge from inpatient and or out – patient rehabilitation settings.

### What is the purpose of home exercises?

After stroke, there will be long-term effects such as partial paralysis and muscle weakness, requiring some assistance with activities of daily living. Stroke survivors are often deconditioned and predisposed to a sedentary lifestyle that



Limits performance of activities of daily living



Increases the risk for falls



May contribute to increased risk for recurrent stroke

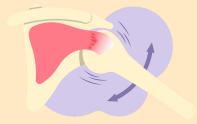
Regular practice of physical activity and exercises at home will help to at least maintain the gains made during in-patient or outpatient rehabilitation sessions and help to reduce cardiovascular risk factors of stroke.

## What are the benefits of home exercises?

If you adhere to the prescribed home exercise program, there are multiple physical, physiological and functional benefits. Exercise helps patients recover from paralysis by stimulating neuroplasticity. This is the mechanism the brain uses to rewire and heal itself after injury. It's the key to functional recovery. The important benefits are:



You can set your own pace for exercises at the convenience of your home setting



Prevent joint stiffness, improves joint range



Reduce muscle tightness, prevent contractures



Improves blood circulation



Improvements in muscle strength and flexibility



Improve heart and lung responses for activity



Lowers cholesterol, blood sugar and blood pressure levels



Increase tolerance for functional activities such as walking, standing, cooking etc.



Improves walking speed



Increase tolerance for pain



Improves mood by reducing levels of anxiety and depression, helps to sleep better



Helps to lose body weight



## **When can I start practicing home exercises?**

If you are getting discharged from hospital setting means that, you are stable enough to carry out the exercises by yourself and or with the help of your caregiver. Your therapist will design the activities and exercises considering all the factors such as – your impairments, medical conditions, types of medications that you are given, your current muscle strength, balance and assistance requirements, functional requirements based on your home setting.

In other words, your home exercise program is unique for you, customised to suit your personal requirements. Your therapist will demonstrate the exercises and activities keeping all the safety considerations in mind. Thus, you can start practicing your home exercise program soon after reaching your own home.

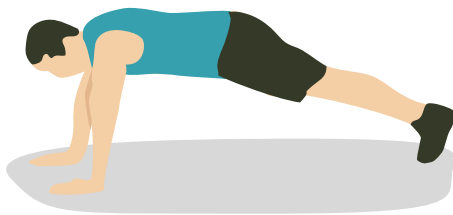
## **What types of exercises should I practice?**

Every individual with stroke is unique with their own set of strengths and impairments. So, every patient needs to receive their own set of exercises demonstrated by therapists to suit individual needs. Exercises given in this handout are examples only. You will not need all of these exercises nor will all of them suit you. If you are having any difficulties or are unsure of the exercises in this handout, please contact your physiotherapist.



## There are various types of exercises that you can practice at home as listed below:

- Passive exercises – when you are unable to move by yourself, movements are done by a helper or caregiver are called passive exercises.
- Active exercises – when you can move, even partially, Doing the movement on your own without help.
- Strength training – using some resistance to do the active movements
- Aerobic training – active exercises to improve heart, lung and muscle tolerance.
- Balance training – exercises that can improve you sitting and standing balance.
- Stretching – to stretch your muscles to prevent shortening, and maintain ideal length



## How much exercise should I do?

Please discuss with your doctor and therapist in charge prior to discharge to clarify on how much exercise is safe for you to do.

The recommendations based on research are as follows –

### **Aerobic exercises**

- Aim for at least 150 minutes of moderate aerobic activity a week in total, using Large-muscle groups (eg, walking, treadmill, stationary cycle, combined arm-leg ergometry, arm ergometry, seated stepper).
- Moderate aerobic activity will raise your heart rate and make you feel warmer, but not too out of breath to speak. This can include cycling, walking, tennis and water aerobics. To achieve 150 minutes per week, you should do 30 minutes of physical activity five or more times a week.
- Intensity / frequency / duration: 50%–80% maximal heart rate, 3–7 days / week, 20–60 min/session (or multiple 10-min sessions).

### **Strength training**

- You can do strength exercises at home, such as lifting small weights with your arms, or using a chair to support you doing leg exercises.
- To gain strength, you would need to repeat the exercises for a set number of times two or three times a week.
- Strength training can be done at home using free weights / isometric exercises, 1–3 sets of 10–15 repetitions of 8–10 exercises involving the major muscle groups, 2–3 days / week

### **Stretching**

- Before or after aerobic or strength training, Hold each stretch for 10–30 seconds

### **Coordination & balance training**

- These are usually combined with strength training, 1–3 sets of 10–15 repetitions of 8–10 exercises involving the major muscle groups, 2–3 days / week.

## When should I exercise?

Some people prefer exercising in the morning, some later in the day. You may want to decide what time suits you, based on how your body feels. If you plan your exercise so that it fits into your daily routine, you might be more likely to keep going with it.

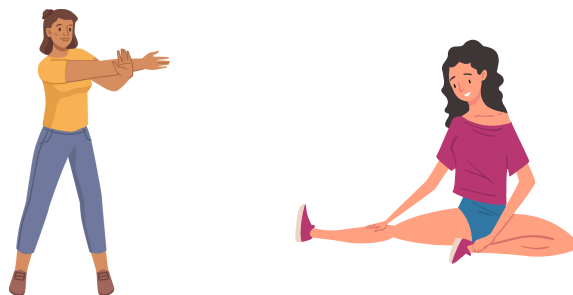


## Avoiding injury:

Before you exercise, you can avoid injury to your muscles by:

1. Warming up before starting, for example walking slowly for 10 minutes before brisk walking
2. Cooling down afterwards by lowering the intensity of the exercise and letting your heart rate decrease
3. Stretching out your muscles at the end.

Please consult your doctor or therapist for further clarifications.



Contributed by Physiotherapy, Rehabilitation, Allied Health Services

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