Physiotherapy

Department of Rehabilitation

Leg Exercises for Stroke Patients

Instructions:

- The patient should do the exercises regularly for 2-3 times a day, repeat each exercise 5-10 times or as advised by the physiotherapist.
- It is all right for the caregiver to wake the patient up for exercise during their hospitalization.
- The patient should perform the exercises under supervision.
- When doing exercises while seated, the patient should sit in a steady chair, preferably with arm rests.
- When doing exercises while standing, have a chair behind the patient and a firm surface for the patient to hold on to.
- When doing exercises while standing, always ensure the patient’s weaker knee does not bend backwards (hyperextend).
- Do not pull on the patient’s weaker arm.
- The patient should not hold their breath while doing exercises.
- Only do the exercises that are advised by the physiotherapist.
- When supervising the patient to exercise, stand on their weaker side.
- If any of the exercises causes the patient pain, stop immediately and consult the doctor or physiotherapist.
- Do not exercise if the patient feels unwell, e.g. feeling giddy, short of breath, chest pain or very tired.

Basic lower limb exercises

**Inner range quads**

- Place a pillow or rolled-up towel under a knee in bent position.
- Lift the heel off the bed and straighten the knee.
- Do not lift the entire leg away from support.
Hamstring stretch
- Support the patient below their knee and heel.
- Bring their entire leg up, while keeping the knee straight.
- Hold the position for up to 30 seconds, or as the patient’s tolerance permits.

Calf stretch
- Cup the patient’s heel with their forefoot resting on your forearm.
- Hold the leg down with your other hand.
- Push the patient’s forefoot up gently. Avoid pain.
- Hold for 30 seconds. Avoid pushing only the toes.

Hip, knee flexion and extension
- Place one hand below the patient’s knee and the other hand below their heel.
- Slide their foot towards buttock.

Bridging
- Keep the patient’s knees bent up and pressed together
- Caregiver to assist by:
  - Pushing down on the patient’s affected knee.
  - Supporting the affected foot.
- Patient to lift affected buttock up.
- This exercise helps the patient to:
  - Move from side to side.
  - Move up and down.

Knee rolling
- Lie on the back with knees bent up and pressed together.
- Bring both knees from side to side, keeping both feet on the bed.
**Hip adductor stretch**
- Support the patient below their knee and heel.
- Bring the whole leg out to the side.
- Hold for up to 30 seconds, or as the patient’s tolerance permits.
- Keep the patient’s foot pointed upwards
- Allow the patient to bring their leg out if they have the strength.

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**Advanced lower limb exercises**

**Leg lifts**
- Sit in a chair with the back well supported. Lift the affected leg up.
- Do not allow the thigh to turn outwards or the body to forward.
- If necessary, patient can use their hand to help lift the thigh off chair surface.

**Knee exercise**
- Sit in a chair with the back well supported.
- Straighten the knee one at a time, then allow it to bend slowly.

**Sit to stand**
- Sit in a chair with feet planted on the floor. The ankles should be slightly behind the knees.
- Push gently with the heels, bend at the hips, and stand while keeping the head up.
- The body weight should be equally distributed to both legs.
Ankle exercise
- Lift alternate foot off the floor while keeping the heel on the floor.

Weight shifting in standing
- Stand with legs apart, feet level.
- Shift the hips to the left then right.
- Keep the hips and knees straight.

Knee control exercise
- Stand with a chair on the unaffected side for support.
- Practise stepping up onto a block with the unaffected leg.
- Keep the affected hip and knee straight and affected heel on the floor.

Calf stretches
- Stand with the unaffected leg slightly bent in front, and the affected leg behind.
- Lean forward gently, placing weight onto the unaffected leg until a stretch is felt in the calf of the affected side.
- Keep the back leg straight.
- Hold for up to 30 seconds, or as tolerated.
Hamstring stretches

- Sit with the affected side on a low stool, knee and back straight.
- Lean forward gently at the hips until a stretch is felt in hamstrings of affected side.
- Hold for up to 30 seconds, or as tolerated.

Disclaimer:
The information provided in this publication is meant purely for educational purposes and may not be used as a substitute for medical diagnosis or treatment. You should seek the advice of your doctor or a qualified healthcare provider before starting any treatment or if you have any questions related to your health, physical fitness or medical conditions.