



# Lower Limb Muscle Strength Training Exercise Nursing Guidance

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## I. Purpose

Prevent and reduce the chance of a fall by strengthening the muscles of the lower limbs. The balance ability is highly correlated with the lower limb muscle strength. The lower limb muscle strength must reach a certain level to balance and reduce the chance of falling.

## II. Method

- i. Select the following exercise on the bed, chair, or standing depending on the patient's condition.
- ii. According to the physical condition of the patient at the time, do three rounds a day, 5 times per round.
- iii. If you do not feel tired or breathless, you can increase it once a day, up to 20 times.

## III. Note

- i. A caregiver must be accompanied in the exercise of the exercise.
- ii. Take natural breathing when doing exercise, and do not close the air to prevent discomfort caused by sudden rise in blood pressure.
- iii. If the body is unwell or the vital signs such as body temperature, pulse, and breathing are unstable on the day, do not force the exercise to avoid accidents.

- iv. If you experience dizziness, nausea, vomiting, cold sweat, fatigue, difficulty breathing, rapid or slow heartbeat, and changes in consciousness during exercise, stop exercising immediately and notify your healthcare provider.
- v. If you are in a standing position, you must pay attention to the surrounding environment and use support such as walkers, corridor handrails, etc. to avoid falling.

#### IV. The sports content includes the following:

##### i. Hip movement



Put your hands on the bed, flex your legs, and step on the bed with your feet.



Lift your hips up from the bed to the highest, and then stop after counting from 1 to 5.

## ii. Hip muscle movement



**Lying on the side and knees straight.**



**The thigh is lifted up to the highest and then paused, from 1 to 5 and then put down.**



**The knees are straight and the pillows are sandwiched between the legs.**



**After clamping the pillow to the inside, pause and relax from 1 to 5.**

### iii. Knee exercise

#### ★Prone position



The knee is straight.



The calf is lifted off the ground, paused at the highest point, and put down from 1 to 5.



Bend the knee and knee to the abdomen to force to the highest point and then pause, from 1 to 5 and then put down.

## ★Sitting position



The knee is flexed to the highest point after the flexion to the abdomen, and is lowered from 1 to 5.



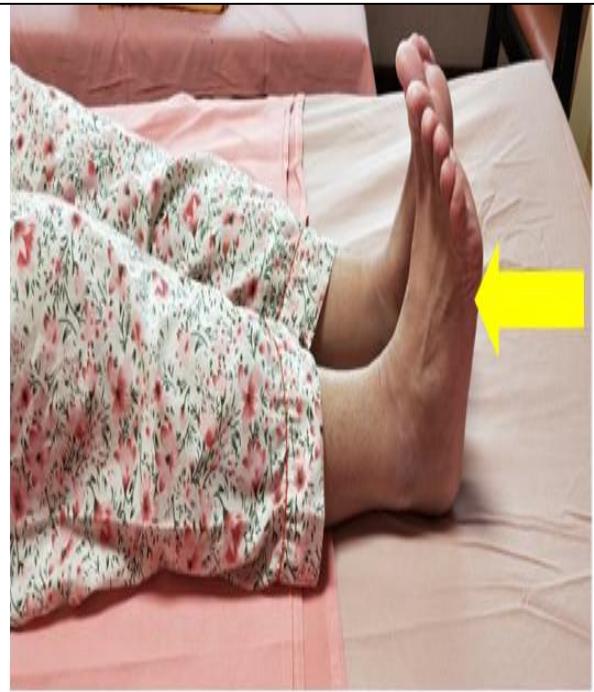
The knee joint is stretched straight down and the calf is lifted off the ground. After the highest point, the pause is made, and the number is lowered from 1 to 5.

#### iv. Ankle joint movement

##### ★Sitting posture



The back of the foot is pressed down to the lowest position and then paused, and the number is restored from 1 to 5.



The back of the foot is pressed upwards to the highest and then paused, and the number is restored from 1 to 5.

## ★Standing posture



When standing, a handrail or railing.



Pause your toes to the highest post, and then drop them from 1 to 5.



Lift the heel to the highest and then pause, from 1 to 5 and then put down.

If you have any question or suggestion, please contact with us. We are happy to provide you services to you. Contact telephone number: MacKay Memorial Hospital: (02)25713760; Hsinchu MacKay Memorial Hospital: (03)5745098; Taitung MacKay Memorial Hospital: (089)310150 ext:311. Time of consultant: 9:00 am~12:00 noon, 2:00 pm~5:00 pm Monday ~ Friday.

**May God Bless You**