Not doing strengthening exercises

In pain or scared of fall

Not eating enough calories and protein

Wasting of thigh muscles

Eating less than 5-6 taels of meat a day

Feeling weak all the time

Physiotherapy Series:

8 Forms of Strengthening Exercise



- Muscle loss occurs as a normal process of aging. "Sarcopenia" refers to a clinical condition in which muscle loss becomes severe
- The loss of muscle mass results in a reduction in strength, causing a decline in mobility and balance. This increases the risk of falling and fall-related complications such as fractures and death
- How can we regain our muscle strength? The method is simple. It just requires improving dietary intake, doing muscle strengthening exercises and adding in moderate intensity aerobic exercises

Notes for the Elderly When Doing Strengthening Exercises

Choice of Weight	Options include water bottles, sandbags, body weight or weight training equipment
Amount of Weight	Start with lighter weights： such as a sandbag of 1-2 pounds, water bottles filled with 300-500ml water, or bending down to a lesser degree in a squat exercise
Amount of exercises	Aim to do 8-10 exercises that target major muscle groups
Number of Repetitions	Aim to do 10-15 repetitions of each exercise as 1 set, 1-3 sets for each exercise with breaks of 2-3 minutes in between every time. Do this 2-3 times a week (alternate day)
During exercise	Moderate effort should be felt while exerting without provoking any discomfort
After exercise	Mild tiredness should be felt over the involved muscle after exercise, and no pain nor excessive muscle soreness should be felt on the day after exercise

1 Lift a Water Bottle from Below Knee in a Sitting Position

Effect Improve arm strength

Target area Muscles at the front of upper arm, back of shoulder and upper back

Equipment A water bottle filled with 300-500ml water







Starting position

- Sit with legs apart and feet on the ground, sitting up straight without leaning on the backrest
- Hold the water bottle with your right hand between your thighs at a level lower than your knees, and then put your left hand on your left thigh

Steps

1. Lift the bottle up to the right side of your waist
2. Hold for 5 seconds. You should feel tightness over the muscles around your upper arm, shoulder blades and upper back
3. Relax and resume the starting position

Number of Repetitions

- Repeat 10-15 times with your right arm, then repeat the exercise with your left arm

2 Lift a Water Bottle from Shoulder Level in a Sitting Position

Effect	Improve arm strength
Target area	Muscles at the back of upper arm, front of shoulder, and upper back
Equipment	A water bottle filled with 300-500ml water





Starting position	• Sit with legs apart and feet on the ground, sitting up straight without leaning on the backrest • Hold the water bottle with your right hand to the side of your right shoulder, and put your left hand on your left thigh
Steps	1. Straighten your right arm to lift the bottle to the front and above right shoulder 2. Hold for 5 seconds. You should feel tightness over the muscles at the back of your upper arm, anterior shoulder and upper back 3. Relax and resume the starting position
Number of Repetitions	• Repeat 10-15 times with your right arm, then repeat the exercise with your left arm

3
Knee Extension with an Ankle Weight in a Sitting Position

Effect Strengthen the thigh muscles, reduce risk of fall and protect the knee joints

Target area Muscles over the front of the thigh and lower leg

Equipment Start by using a sandbag or home-made rice bag of 1-2 pounds





Starting position

- Secure a cuff weight over your ankle while seated
- Sit with your back against the backrest of the chair and grasp the sides of the seat

Steps

1. Point your toes up and straighten your right knee slowly
2. Hold for 5 seconds. You should feel tightness over the muscles at the front of the thigh and lower leg
3. Relax and resume the starting position

Number of Repetitions

- Repeat 10-15 times with your right leg, then repeat the exercise with your left leg

4 Sideway Leg Lift with an Ankle Weight in a Standing Position

Effect
Strengthen the leg muscles and improve sideways balance

Target area
Muscles over the side of hips and waist

Equipment
- Start by using a sandbag or home-made rice bag of 1-2 pounds
- A sturdy chair with high backrest or stable handrail of appropriate height



Starting position
- Secure a cuff weight over your ankle while seated
- Stand up and hold onto the backrest of a sturdy chair or handrail

Steps
1. One leg at a time, lift your leg to the side 1-2 feet off the ground
2. Hold for 5 seconds. You should feel tightness over the muscles at side of your hips and back
3. Relax and lower your leg to the starting position

Number of Repetitions
- Repeat 10-15 times in each leg, alternatively between both legs

5 Knee Lift with an Ankle Weight in a Standing Position



Effect Improve balance and posture

Target area Muscles over hips, abdomen and back

Equipment
- Start by using a sandbag or home-made rice bag of 1-2 pounds
- A sturdy chair with high backrest or stable handrail of appropriate height



Starting position
- Secure a cuff weight over your ankle while seated
- Stand up and hold onto the backrest of a sturdy chair or handrail

Steps
1. Lift your right knee to about 90 degrees while keeping your back straight by tightening up your abdomen and hips
2. Hold for 5 seconds. You should feel tightness over the muscles over your hips, abdomen and back
3. Relax and resume the starting position

Number of Repetitions
- Repeat 10-15 times in each leg, alternatively between both legs

6

Heel Raise in a Standing Position

Effect	Strengthen lower leg muscles and improve gait speed
Target area	Calf muscles
Equipment	A sturdy chair with high backrest or stable handrail of appropriate height

Bodyweight exercise



Starting position	• Hold onto the backrest of a sturdy chair • Stand with feet apart at shoulder width
Steps	1. Raise your heels so that you are standing on your toes. Keep your back straight 2. Hold for 5 seconds. You should feel tightness over your calf muscles 3. Relax and lower your heels to resume the starting position
Number of Repetitions	• Repeat 10-15 times

7 Mini Squat

Effect Improve leg strength, which can help with going up and down the stairs, and protect the knee joints

Target area Muscles over buttocks and anterior thighs

Equipment A sturdy chair with high backrest or stable handrail of appropriate height

Bodyweight exercise



Starting position

- Stand with feet apart with feet slightly wider than shoulder width and hold onto the backrest of a sturdy chair
- Point your toes outward slightly

Steps

1. Squat down slightly; your hips should move downward and backward, your abdomen tightened and trunk leaning forward
2. Keep your back straight. Your knees should be right above your toes, and should not go in front of your toes
3. Hold for 5 seconds. You should feel tightness over the muscle at the front of your thigh and buttocks
4. Relax and then resume standing posture

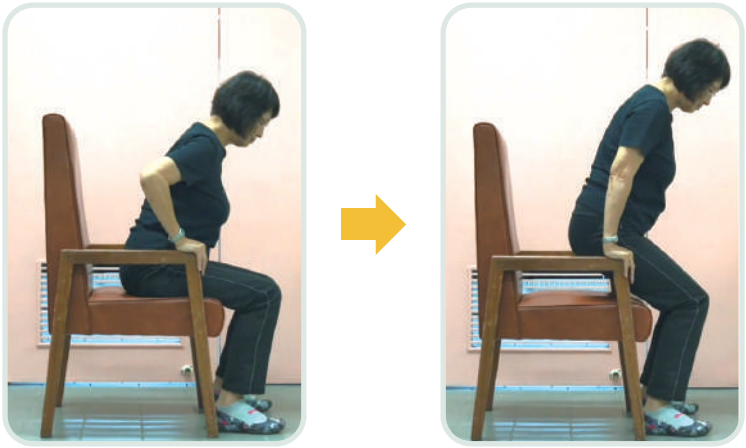
Number of Repetitions

- Repeat 10-15 times

8 Arm Chair Pushup

Bodyweight exercise

Effect	Improve strength of arms and posture
Target area	Muscles over the back of upper arms, shoulders and upper body
Equipment	A sturdy and stable chair that allows bearing body weight over the armrests



Starting position	• Put the chair with its back against the wall, sitting up straight without leaning on the backrest • Hold on the armrest firmly with both hands
Steps	1. Push on the armrests with both arms until the buttocks are lifted up 2. Hold for 5 seconds. You should feel tightness over the muscles over your upper arm, shoulders and upper body 3. Relax and resume sitting posture
Number of Repetitions	• Repeat 10-15 times

General Safety Precautions for Exercise

1. Progress gradually according to your own capacity
2. Make sure to maintain proper posture and correct movement throughout the exercise. You should breathe normally throughout, or breathe out during exertion of effort
3. Use a sturdy chair with high backrest or stable handrail of appropriate height
4. Perform warm up and stretching exercises before the main workout
5. Perform cool down and stretching exercises after completion of the main workout
6. Patients with chronic diseases, such as coronary heart disease, hypertension, diabetes, arthritis, and so on, should consult a doctor or physiotherapist before exercising
7. Do not perform these exercises if there is an unhealed wound, recent fracture, sprain or joint dislocation, severe pain or severe osteoporosis
8. Stop if you feel any discomfort while exercising. If the discomfort persists or becomes severe, seek urgent medical advice

Please consult a physiotherapist or other healthcare professionals if you have any queries about this pamphlet



Community Resources for Strengthening Exercise

Leisure and Cultural Service Department

Elderly Fitness Corner / Fitness Gyms



Neighborhood Elderly Centres and Social Centres for the Elderly

Example: Resistive Band Exercise Class



Elderly Health Service, Department of Health
Website: www.elderly.gov.hk
Elderly Health Infoline: 2121 8080

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