Exercises for older adults undergoing rehabilitation

Flexibility refers to the amount of movement possible around a joint and is necessary for normal activities of daily living such as stretching, twisting, bending and turning. Maintenance of flexibility is important as posture and gait can be affected by sedentary living.

The following series of exercises will improve flexibility and are ideal as limbering or warm-up exercises.

Before commencing there are simple points to consider:

- Comfortable, loose fitting clothing should be worn, shoes are not essential.
- Exercise is more fun if done with music turn on the radio or play a record with a good underlying rhythm.
- For optimal benefit, the exercises should be performed three or four times a week, but may be used at any time to loosen up.
- Do not exercise if you have a temporary illness or are unduly tired and do not exercise when the weather is extremely hot or humid.
- Do not persist with an exercise if the movement continues to cause excessive pain or discomfort.
- Muscle stiffness is quite normal when you begin to exercise for the first time. However, if the stiffness persists, or if you should feel unduly fatigued after exercising, you may be working too hard! Slowing down and progressing more gradually should help.
- Breathe normally throughout all exercises and do not hold your breath during any movement.
- Perform all exercises in a smooth, rhythmical manner, stretching to full range and holding momentarily before returning to the start position. Avoid bouncing and jerking movements and try to relax during all exercises.
- Stop exercising immediately and consult your doctor if you experience any of the following: a) nausea, b) dizziness, c) breathlessness, d) tightness in the chest, or e) severe muscular or joint pain.
- This exercise program should take between 15 and 30 minutes depending upon the number of repetitions of each exercise.
Flexibility exercises:

1. Neck Stretch
   Aim to stretch the side of the neck.
   Move your head from side to side gently dropping your head to shoulder level.
   Repeat. All movements should be performed slowly to avoid strain or dizziness.

2. Shoulder raises and rotations
   Aim to loosen up the shoulders and neck region.
   a) Shrug the shoulders upward toward the ears, then relax. Repeat.
   b) Rotate the shoulders slowly in one direction. Repeat in opposite direction.

3. Shoulder push outs
   Aim to stretch the upper trunk and shoulders.
   Interlock the fingers of both hands and raise above head. Push the palms upwards, straightening out the elbows. Repeat.

4. Arm/trunk stretch
   Aim to stretch the upper trunk and shoulder.
   a) Stretch one arm back behind the body, slowly turn your head, shoulder and trunk to look behind.
      Repeat.
   b) Raise one arm up over the head, as high as possible inhaling during the movement. Exhale as your arm is lowered. Repeat using other arm.
5. Hip Stretch

Aim to stretch the large muscles of the upper leg. Sit on the edge of a chair. Raise one leg up to the chest, then return the foot to the floor and extend the leg back as far as possible. Repeat with other leg.

6. Ankle rotations

Aim to loosen up the ankle region. Extend one leg forward and rotate the ankle, making large circles in clockwise and anti-clockwise directions. Repeat with other foot.

7. Hamstring stretch

Aim to stretch the lower back. Caution: do not bounce during this movement. Place one leg upon another chair. Keeping this leg straight, slowly relax whilst stretching the arms forward to feel tension behind the knee. Don’t forget to breathe! Hold and repeat.

8. Arm circling

Aim to loosen up the shoulders and trunk. Move both arms together and cross in front of your face. Then reverse the direction of the movement until arms are outstretched at your side. Repeat.
9. Calf stretch

Aim to stretch the calf muscle.
Stand facing a wall, with one leg in front of the other.
The front leg should be flexed with the rear leg straight. Support the upper body by placing both hands on the wall. Slowly lower the hips towards the wall, whilst keeping the back straight and both heels on the ground. Repeat.

10. Side bends

Aim to stretch the trunk.
With feet widely spaced, and knees slightly bent, slowly exhale and lower the shoulder and arm towards the ground so that the hand moves to the back of the knee. Raise the other arm into the air, above the head. Hold and repeat.

11. Thigh stretch

Aim to stretch the muscles of the calf and hip.
With both hands on the ground supporting the upper body, place one leg forward in between the hand, with the knee over the ankle. The rear knee is slowly lowered to the ground. Repeat.

12. Knee tucks

Aim to stretch the buttocks and thigh region.
Lie on your back with both knees bent. Slowly bring one knee towards your chest, and hold. Repeat.
13. **Body curl**

Aim to stretch the lower back region and spine.

Lie on your back. Slowly pull both knees to your chest with the hands. Curl the head in, (and exhale), to meet the knees. Hold then return to the starting position. Repeat.

14. **Trunk rotations**

Aim to loosen up the lower trunk region.

Lie on your back with both arms outstretched to the side. Bend both knees up, with the heels remaining on the floor. Slowly rotate the knees from side to side. Repeat.

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**Strengthening Exercises**

Muscular fitness can only be maintained by continued usage. Strength is gained by gradually overloading muscles. The following series of exercises will assist in improving muscular strength of the arms, legs and trunk.

15. **Calf raises**

Aim to strengthen the calf muscle. Balance yourself by holding onto a chair or table. Slowly raise the heels up high, balancing on the toes. Lower after a count of three. Repeat.
16. **Wall arm push outs**

Aim to strengthen the upper arms and shoulders.
Stand facing a wall, about arm's length away.
Slowly inhale as you bend the arms and lower your body towards the wall. Your heels may lift if you wish.

Exhale as you push back to the start position.
Repeat.

17. **Squats**

Aim to strengthen the thigh muscles.
Caution: never bend the knees beyond a right angle, as injury to the knees may occur.
Stand upright with your back against a wall, and heels about 25cm away from the wall.

Keeping the back straight and head erect, slowly lower the body by bending the knees and sliding down against the wall. Hold, then return to start position and repeat.

18. **Bridging**

Aim to strengthen the lower back and buttocks.
Lie on your back with both knees bent. Slowly raise your hips up off the floor. Hold for a count of six, then relax. Repeat.
19. Abdominal curls (modified sit-ups)

Aim to strengthen the stomach region.
Lie on your back with both knees bent, feet flat on the floor and arms at sides. Press the small of the back into the floor, then slowly exhale and curl up as you slide your arms towards your knees. When performing this exercise, it is only necessary to lift the back up to an angle of about 45 degrees. Hold for a count of two, and lower. Repeat.

20. Side leg raises

Aim to strengthen the upper leg.
Lie on side with head resting on extended arm. Bottom leg should be bent at the knee to protect the back. Slowly raise top leg to just about shoulder height. Lower the leg, maintaining a straight knee with the ankle pulled forward. Repeat.

21. Pelvic tilting

Very important exercise for women.
Aim to strengthen the pelvic region. Lie on your back. Draw in abdominal muscles and tighten buttocks so that the small of you back flattens. Place fingers behind the back and attempt to push into the floor. Hold and repeat.