

Lower body: joint mobility and strength

These water-based exercises are recommended by Arthritis NZ to help with a variety of conditions. It should not hurt to do these exercises, but it is OK to feel your joints and muscles work. See your general practice team or physiotherapist if your pain or movement gets worse from doing these exercises.

Tell the pool staff and see your general practice team if you feel unwell while doing these exercises.

Repeat the movements in sets of 10 to 15 repetitions.

If the exercise uses one limb at a time, do a full set on that side before changing to the other limb.

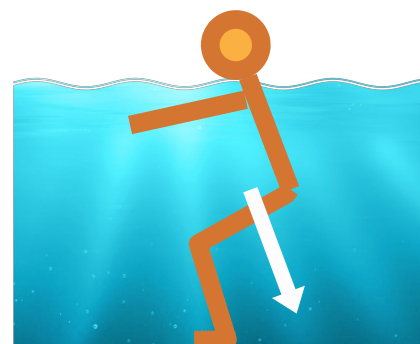
If you want to improve your joint mobility, you can use the **EASIER** form. To increase your muscle strength, you can use the **HARDER** form.

Squat

- Stand with your feet a hip width apart.
- Bend your hips and knees to squat down.
- Keep your knees over your feet.
- Push back up with your thighs and bottom.

EASIER: Hold the handrail or a float to take the weight off your legs.

HARDER: 1. Stand in shallower water. 2. Stand on one leg (hold the handrail if needed). 3. Push up faster



Calf raise

- Stand with your feet a hip width apart.
- Hold the handrail if needed.
- Lift your heels off the floor and rise on to your forefeet.
- Lower back down so your feet are flat.

EASIER: Hold the handrail or a float to take the weight off your legs.

HARDER: 1. Stand in shallower water. 2. Stand on one leg (hold the handrail if needed). 3. Push up faster.



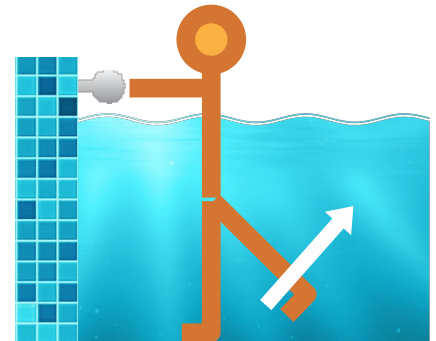
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Hip extension

- Stand with your weight on one leg.
- Hold the handrail if needed.
- Lift your non-weight-bearing leg behind you.
- Keep your knee straight and trunk upright.
- Return your foot to the floor.

EASIER: Hold the handrail and lean forwards before lifting your leg.

HARDER: 1. Move faster. 2. Lie on your back supported by floats (including one under your pelvis) and push your leg down towards the bottom of the pool.

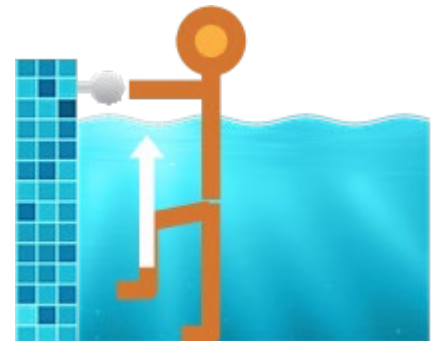


Hip and knee flexion

- Stand with your weight on one leg.
- Hold the handrail if needed.
- Raise your non-weight-bearing knee to horizontal if possible.
- Lower your leg back down to the floor.

EASIER: Place a float around your ankle to help raise your knee (this will make it harder to push your foot downward).

HARDER: 1. Place a fin on your foot. 2. Move faster.

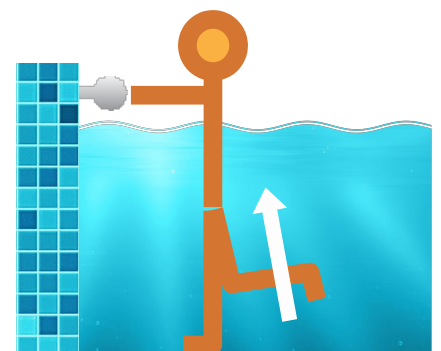


Hamstring curl

- Stand with your weight on one leg.
- Hold the handrail if needed.
- Bend your non-weight-bearing knee and lift your heel behind you.
- Keep your hip straight and knees side by side.
- Straighten your knee and return your foot to the floor.

EASIER: Allow your knee to move forwards as you lift your heel.

HARDER: 1. Place a fin on your foot. 2. Move faster.



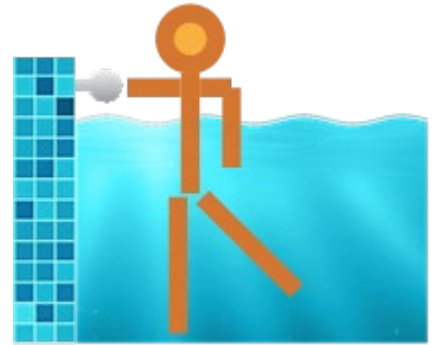
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Hip abduction

- Stand sideways to the wall (hold the handrail for support if necessary).
- Raise your outer leg to the side, keep your trunk straight and your toes pointed forwards.
- Return your leg to the resting position.

EASIER: Place a float around your ankle to make it easier to move your leg.

HARDER: 1. Move your leg faster. 2. Lie flat in the water using hip and neck floats. Keep your knee pointed at the ceiling while moving your leg to the side.



Adapted with permission from Darlow B, Perry M, Chapple C (2013) Water based exercise for people with arthritis. University of Otago and Arthritis New Zealand. This manual was produced as part of a joint project between Arthritis New Zealand and the School of Physiotherapy, University of Otago. Further information and advice about managing arthritis is available free by calling an arthritis educator 0800-663-463 or visiting www.arthritis.org.nz. Last reviewed February 2024.