

# LOW LOAD ACTIVITIES FOR OSTEOARTHRITIS:

## Optimal Set-Up and Modifications

If your hip and/or knee pain is much worse on stairs or with longer walks, consider starting with activities that put less weight load on your joints, such as: cycling, walking with walking poles, Tai Chi, yoga, Pilates, and water-based activities like aqua fit, swimming, or pool walking.

### CYCLING

Cycling is frequently recommended because there is much less load through your hip, knee & ankle joints as your weight is supported on a seat, allowing you to do more with less discomfort. Cycling provides a low-impact, high-intensity heart/lung workout, builds leg muscle strength and endurance that are often weakened by arthritis, and helps maintain hip and knee movement.

If you prefer to use a stationary bike there are 2 types to choose from: upright and recumbent. Choose the one you find more comfortable, both will provide you with health benefits.

**Setting up the bike (indoor or outdoor) in the right position will make you more comfortable, limit your chance of injury, and allow you to get the most from your workout.**

- ▼ Seat position - your knee should be slightly bent and in a relaxed position, when the pedal is furthest away from you no matter what type of bike you are on. If your knee is bent too much, you may experience more discomfort in your lower back, hips & knees. On the other hand, you don't want to be reaching for the pedals.
- ▼ Handlebar height (on an upright bike) - with your hands on the handlebars, your elbows should be slightly bent so your neck, shoulders, arms, and hands are relaxed.
- ▼ Pedal straps hold your feet in place on the pedals, allowing you to push down and pull up in a circular motion. This gives you a better workout (by using more muscle groups) and places less load on the knees. Straps should be snug; if your feet feel numb, they are too tight.



Upright stationary bike



Recumbent stationary bike

### WALKING WITH WALKING POLES

The use of walking poles has become quite popular as they can help with balance, reduce limping, offload the lower extremity joints and engage more muscles of the arms & legs to provide a greater cardio workout. A number of community groups offer free trial sessions that show you how to set up and use the poles properly and go for a walk. To find a group near you, look up Nordic walking or pole walking.

To measure the height of the pole, have your walking shoes on and bend your elbow to a 90-degree angle. With the pole straight up from the ground, the handle should be at the height of your hand. There are many types of poles available, with or without hand straps. You may want to try different types to see what you prefer. If you are walking on hard surfaces, make sure your poles have rubber tips to absorb shock. Use the poles in the same way that you walk, by moving one arm forward with the opposite leg.

## TAI CHI, YOGA AND PILATES

Tai Chi, yoga and Pilates are often referred to as mind-body activities. They focus on body position and alignment to produce precise and optimal movement patterns also known as neuromuscular training. Optimal movement patterns reduce abnormal load on the joint and result in less pain. These practices focus on the alignment of knee tracking over the 2nd toe while bending and straightening in standing position, keeping your knees from collapsing inward. This alignment is also important in everyday activities like rising from a chair, doing stairs, bending down and riding a bike. These practices also work on single leg balance, requiring strength of your core and buttock muscles to keep your pelvis level and balanced, which can be important for walking without a limp.

Getting up and down from the floor may be hard. Using a wall, chair or aerobic step can help you get up. Doing your exercises seated on an aerobic step or stool rather than on the floor may be easier. If kneeling on the floor is uncomfortable, you can either kneel on or over a rolled-up towel or yoga mat positioned under your upper shin.



Doing exercise on a chair may be easier

## WATER-BASED ACTIVITIES

Water supports a large proportion of our body weight, reducing pressure on the joints and making it much easier to move for people that have trouble with weight bearing activities. The deeper the water, the more offloading occurs. Walking in water can be a good exercise and much easier than on land. Swimming and aquafit can also be fun. Some people with hip and knee arthritis may have trouble with leg movements like the breast stroke or eggbeater, so should try using another movement like the flutter or scissor kick.