

## Exercise and physical activity

There are many different forms of exercise that provide benefits in terms of improving pain and function for people with hip and knee osteoarthritis. This includes strengthening exercise, aerobic exercise such as walking and cycling, warm-water exercise and mind-body exercise. Yoga is an increasingly popular low-impact, mind-body exercise requiring minimal equipment. Yoga combines physical exercise in the form of static and dynamic postures with mindfulness strategies such as deep breathing and relaxation. This combination may be useful for people living with osteoarthritis.

In addition, low levels of general physical activity are common in people with osteoarthritis. Scientific evidence shows that people with osteoarthritis are less active than people of the same age who do not have osteoarthritis. This is because many people with osteoarthritis worry that doing physical activity can increase their pain. This leads many people to change the way they do things- for example, taking the elevator instead of the stairs, reducing the hours that they work, avoiding trying new activities and taking more rest during the day. For some people, the fear of pain increasing is enough to stop them from being active. A habit of under-activity can occur.

### What types of general physical activity can I do?

The good news is there are lots of options! The table below lists some ideas you could consider.

Take more steps in your day	Sit less in the day	Offer to walk a dog
Walk at a faster rate	Play with the kids/grandkids	Walk with a friend
Perform cleaning or other tasks more vigorously	Take the stairs	Walk up hills
Alter your transport to more active options	Gardening	Stand up or exercise when watching TV
Start a new activity (swim, cycle, walk)	Take a class (water aerobics, yoga, low impact aerobics)	Walk while on the phone
Join a club (dance, bowls, hiking, tai chi)	Park the car further away	Wash the car

### How intense does the activity need to be?

For good health, people should spend some time on most days being physically active at moderate intensity. However, if this is too difficult for you at first, health benefits can still be gained by doing more light physical activity. Therefore, you should focus on increasing the amount of general physical activity you do, regardless of the intensity.

So how do you gauge the intensity of an activity? One way is to think about how hard you are breathing. If you are breathing harder than normal but still able to speak in sentences, then you are working at a moderate intensity. If you are out of breath and can speak only one word at a time, then your intensity is probably vigorous! If you don't even have to breathe deeper or faster, then you are probably working at a light level.

Another way of gauging if your activity is moderate intensity is to use a modified version of the Borg scale to estimate intensity. The Borg scale is based on how you feel during physical activity such as the amount of breathlessness you feel, how much you sweat, and the muscle fatigue you experience. Taking all these feelings into consideration, you can rate your level of exertion from 0 to 10, where 0 is rest or no effort at all, and 10 is maximal exertion. A level of 3-4 out of 10 indicates moderate intensity activity.

#### RATING DESCRIPTOR

0	Rest
1	Very, Very Easy
2	Easy
3	Moderate
4	Somewhat Hard
5	Hard
6	-
7	Very Hard
8	-
9	-
10	Maximal

### Tips for increasing your general physical activity levels:

- Small changes to your daily routine can have a positive effect on your health and your osteoarthritis.
- Avoid long periods of inactivity in your day.
- More frequent short bouts of activity work best for people with osteoarthritis.
- Perform physical activities over realistic timeframes.
- Gradually increase your amount of physical activity and/or your intensity.
- Vary your activity by changing the environment.
- Pace your activities- even on bad days.
- Time yourself to help you pace your activity and make sure you don't over- or under-do it.
- Use an activity monitor (such as a Fitbit) to record your daily steps.
- Perform moderate intensity activity in bouts of at least 10 minutes. That means you are puffing for 10 minutes continuously.