

## PATIENT HANDOUT 1. Exercise and Osteoarthritis (OA)

Osteoarthritis is often thought of as “wear and tear” arthritis but it is inflammation that causes a lot of the joint damage . Exercise is one of the best treatments for osteoarthritis and part of the “repair” process. Muscles tend to get weaker when people have osteoarthritis, because they are afraid that exercising them will make them feel worse or do damage. Actually, exercise strengthens muscles around the joints and reduces the risk of injury and more joint damage. Exercise can also improve mood, decrease pain, increase flexibility, strengthen the heart and improve blood flow, maintain weight, and promote general physical fitness. Exercise can also be inexpensive. Your primary care provider (or physiotherapist, if you have one) can recommend types of exercise that will work for your specific condition. You may also look for programs in your community. The Arthritis Society website is very helpful and has a Physical Activity and Arthritis Exercise Guide and 10 Top Exercises to download: <https://www.arthritis.ca/AS/media/pdf/Living%20Well/Top-10-Exercises-EN.pdf>.

### Exercising for Osteoarthritis using the FITT principle (Frequency, Intensity, length of Time to exercise, Type of exercise to choose)

	<i>Aerobic/Endurance exercise</i>	<i>Resistance/Strength training</i>	<i>Flexibility/Stretching</i>
<i>Frequency</i>	Most days of the week.	At least two to three days per week. Plan a day of rest in between sessions.	Every day, preferably after one of the other workouts, as muscles are warm and will be ready to stretch. Flexibility will increase.
<i>Intensity</i>	<p>Total exercise time is more important than intensity. If you exercise at an intensity that is too high, you may not be able to exercise very long and you increase your risk of injury.</p> <ul style="list-style-type: none"> <li>Adjust your workouts based on your symptoms. You can expect some discomfort after your workouts but you should never be in pain. If pain does happen and is greater two hours after exercise than it was before, reduce the length and intensity of your next session.</li> <li>Think about using a pedometer or other device to track your exercise. Slowly work toward a goal, like maybe 10,000 steps per day.</li> </ul>	Light to moderate. Light intensity is weight you can lift 15 to 20 times. Moderate intensity is weight you can lift 10 to 15 times before tiring. Adjust your workouts based on your symptoms. You can expect some discomfort after your workouts but you should never be in pain. If pain does happen and is worse two hours after exercise than it was before, reduce the length and intensity of your next session.	<p>Work all major muscle groups (legs, hips, chest, back, shoulders, arms). Stretch warm not cold muscles after walking or some kind of physical activity. Avoid over -stretching. Stretch to a bit of discomfort, then hold, breathe and allow the muscles to relax and get longer.</p> <p>Range of motion (every day, within pain limits and not during flare ups).</p>
<i>Time</i>	Divide your activity into many short sessions during the day. Try three 10-minute sessions to start or even five 6-minute sessions. Set goals by <i>time</i> rather than <i>distance</i> . If you haven't been active for a long time, start with shorter sessions. Add five minutes to each session, increasing every two to four weeks. Over time, build up to being active at least 30 minutes a day on most days of the week.	This depends on the number of exercises you do. Start with one set of 10–15 repetitions and gradually increase the amount of weight you can lift. Also gradually increase from 1 to 3 sets of 10 repetitions each.	2–3 sets for each muscle group. Hold without moving (no bouncing!!) for 20–30 seconds each stretch. If not stretched, tight and short muscles can actually make arthritis pain worse.
<i>Type</i>	Low-impact and non-impact activities, such as walking, swimming, water exercise and cycling. A long warm-up and gradual cool down may help you avoid additional joint pain. Buy a good pair of shoes that absorb shock to get started walking. Invite others to join you. Dogs make great walking partners! According to the Arthritis Society, Tai chi, yoga and aquatic exercise are appropriate not only for OA, but also fibromyalgia and rheumatoid arthritis.	Exercise all major muscle groups but concentrate more on muscles surrounding the affected joints first. This will help strengthen and stabilize them. Exercise with a machine or light free weights, resistance bands or elastic tubing with handles, or use your body weight as the “resistance”. Exercise in the water using the water as resistance may help reduce stress on the joints during activity. There is little difference between methods.	Besides your stretching program, yoga, Pilates and tai-chi help improve strength and flexibility. They also help you relax and reduce pain.

