

Osteoarthritis and exercise

Osteoarthritis (OA) is a common chronic disorder of the joints that predominantly affects older people but can also affect younger individuals following joint injury. The most common joints affected by OA are those of the hips, knees, big toe, spine and hands.

How does exercise help?

All clinical guidelines recommend exercise to manage OA. Considerable research shows that exercise benefits people with a wide range of disease severities, including people with severe pain or changes seen on X-ray. Overall, exercise is as effective in relieving symptoms as are pain medications and anti-inflammatory drugs. However, exercise is safer and has fewer side effects. Exercise can help to:

- reduce pain;
- increase muscle strength;
- improve the range of joint motion;
- improve balance;
- prevent de-conditioning (loss of fitness and muscle wasting);
- improve physical function; and
- improve wellbeing.

What types of exercise is best?

Many types of exercise are beneficial for people with OA. Choose a type of exercise that you enjoy and can easily incorporate into your daily life. Strength (resistance) training and/or aerobic exercise are recommended forms of exercise.

- Strength training can be performed at home or at the gym. The thigh, hip and calf muscles are often weak in people with OA. Resistance can be applied with weights, elastic tubing or body weight
- Aerobic exercise may include walking, cycling, or using a rowing machine or a seated stepper. High-impact exercises (e.g. jogging) should be avoided.
- Aquatic (water) exercise can be particularly useful. The water buoyancy minimises the load on the joints and reduces pain on weight-bearing. Water exercise can be helpful before progressing to land-based exercise.
- Other types of beneficial exercise include tai chi, balance exercises, and stretching to improve the range of joint motion and flexibility.

Before starting a physical exercise program, it is recommended that you receive a comprehensive assessment by an appropriately qualified health care provider. This assessment should include clinical evaluation of your OA, and should identify any other health conditions that may be worsened by exercise.

Points to remember

- Aim to exercise 4–5 times per week for at least 30 minutes.
- Some discomfort in the affected joint during exercise is normal and does not indicate a worsening of the OA. A substantial increase in pain or swelling during or following exercise can suggest that modifications are needed.
- Begin the program slowly and progress gradually.
- You will gain the greatest benefits if you perform the exercises regularly.
- Because benefits are lost if you stop exercising, use strategies to help you continue: keep a log book; set achievable goals; ask for support from a partner, family or friends; and vary your exercise program.
- A health practitioner overseeing your exercise program can improve results.
- You may choose to do your exercise program at home, in a gym or in a group setting.
- If you are overweight, losing weight by modifying your diet will improve the outcomes of your exercise program.

References and further information

Exercise is Medicine Australia www.exerciseismedicine.org.au

Find an Accredited Exercise Physiologist www.essa.org.au

Exercise Right www.exerciseright.com.au

1. Bennell KL, Hinman RS. A review of the clinical evidence for exercise in osteoarthritis of the hip and knee. *J Sci Med Sport* 2011; 14(1): 4–9.
2. Uthman, O. A., et al. (2013). "Exercise for lower limb osteoarthritis: systematic review incorporating trial sequential analysis and network meta-analysis." *BMJ* 347: f5555.
3. Juhl C, Christensen R, Roos EM et al. Impact of exercise type and dose on pain and disability in knee osteoarthritis: A systematic review and meta-regression analysis of randomized controlled trials. *Arthritis Rheum* 2013 epubl
4. Lange AK, Vanwanseele B, Singh MAF. Strength training for treatment of osteoarthritis of the knee: A systematic review. *Arthritis Rheum* 2008; 59(10):1488–94.
5. Messier SP, Mihalko SL, Legault C, et al. Effects of intensive diet and exercise on knee joint loads, inflammation, and clinical outcomes among overweight and obese adults with knee osteoarthritis: the IDEA randomized clinical trial. *JAMA* 2013; 310:1263–1273
6. The Royal Australian College of General Practitioners (RACGP).(2009). Guideline for the non-surgical management of hip and knee osteoarthritis July 2009. South Melbourne: RACGP.

