Osteoarthritis can cause pain and stiffness in joints. This is often accompanied by muscle weakness which can increase joint load and instability. There is strong evidence that increasing physical activity reduces pain and improves function, quality of life, and confidence.

Pain and functional improvement can be similar to that achieved with painkillers. Our body’s natural reaction is to immobilise a painful joint but too much rest makes things worse because the muscles become weak and so it loses its ability to provide proper movement. Many people are afraid to exercise because they wrongly believe that it will further damage their joints but doing nothing is harmful to the tissues in and around the joints.

Maintaining a healthy weight through diet and exercise prevents excessive stress through the joint. Along with joint health, regular activity prevents and treats many conditions such as diabetes and cardiovascular disease (such as heart attack and stroke).

Regular physical activity also gives you more energy, builds confidence and can help you to sleep more soundly at night. You can combine your activity time with family and friends or use it as an opportunity to reflect on things and listen to your favourite music.

Recommendations for currently inactive adults with osteoarthritis

Aim to do the following three types of activity:

- **Aerobic activity** at relative moderate intensity for at least 150 minutes (2 hours and 30 minutes) a week – one way to approach this is to do 30 minutes on at least five days each week.

- **Muscle strengthening activity** on two or more days a week which work all major muscles groups (legs, hips, back, abdomen, chest, shoulder and arms)

- **Flexibility exercises** on a daily basis

Do not worry if you struggle to meet the recommendations, because by trying to become more active, you are still gaining some health benefits.
Aerobic activity
Aerobic activity, also known as endurance activity, is when large muscle movements, maintained over a period of time, make the heart and lungs work harder.

Activity Type? – Any type that you can comfortably maintain is ideal. Choose exercises that you enjoy, such as walking, cycling or group fitness classes. Low impact exercises are better but you should vary the type according to any pain experienced. Some examples for different aerobic activity types can be seen in the table below.

How long (duration)? – You can split your total activity amount into minimum bouts of 10 minutes if needed. If you have been inactive for a long time, start with short daily amounts and increase this as your body allows and you feel more confident.

Remember not to sit for hours. A regular break from sitting every hour is healthy.

How hard (intensity)? – Try to progress gradually over time to a relatively moderate-intensity activity. When doing moderate intensity activity you will feel warm, mildly out of breath and mildly sweaty. The ‘talk test’ is a simple way to measure moderate intensity. This means that you can still talk, but not sing, during the activity. Intensity levels reached will vary from time to time according to any pain experienced.

How often (frequency)? – If you aim to do 30 minutes per day then do this at least 5 times per week so that you reach the 150 minutes total per week. Distribute the sessions over the week and aim to have no more than 2 consecutive days without physical activity. When you start any new activities make sure you give your body enough time to recover and adapt to the new stress.

Muscle Strengthening and Flexibility
Activities that promote strengthening and flexibility are vital for a complete physical activity programme. Strength training can reduce pain and weakness associated with painful joints. Being stronger and more flexible makes it easier to carry out aerobic activities, such as brisk walking or swimming. Balance training in Tai Chi, yoga and pilates can also boost your joint confidence and reduce your risk of falls. Visit the ‘Strength and flexibility’ section at www.prescription4exercise.com for some simple video exercises that you can do at home. Specific exercises for painful joints can also be found on the website.

*See prescription4exercise.com for video examples of strengthening and flexibility exercises you can do at home

Examples of Aerobic Activities for adults with joint pain

Walking
This is safe and inexpensive. Wear soft, well-cushioned shoes which provide good shock absorption. Choose ones that fit well without squashing the toes. Walk on flat, even ground.

Cycling
Cycling avoids heavy joint load and increases fitness and muscle strength. You can progress to outdoor cycling which can help with balance. Choose a comfortable bike seat and adjust the seat height so that the knee’s angle is 10-15 degree when most extended. Cycling does require at least 90 degrees of bend at the knee.

Swimming and Running in Water
This type of exercise avoids heavy stress on joints. The joints are supported in water, which make them easier to move. Some neck pain made worse by swimming is often due to poor technique only. Aqua-aerobic exercises sessions can also offer a great overall workout.

Treadmill
Easy to use but requires good balance. Choose a treadmill with soft surface and handrails. Avoid downward grades.

Fitness classes
Choose aerobic classes that have the least amount of high impact. Some classes such as step-aerobics are a great way to keep fit but the impact involved may be too high for your weight bearing joints.
### References

### Further reading
- www.arthritisresearchuk.org/

Visit www.prescription4exercise.com to learn more about physical activity and how it can prevent and treat many long term conditions.

---

### Choosing the right activity

**Where to start?** Try to choose activities that are local, enjoyable and practical. Visit the website for plenty of ideas and choices of things to do new you.

---

### Safety considerations

- If you have led a very sedentary lifestyle, begin by doing low intensity exercise of short duration, e.g. 10 minutes. Increase your level of activity gradually to avoid injury. The development of weak, poorly activated muscles due to long term pain from joints can make some people lose balance and fall. Start slowly and progress as you feel stronger.
- Stop exercising if you feel dizzy, sick, unwell or very tired.
- See a doctor if you are having chest pain, black outs or breathlessness on mild exertion.
- Increasing physical activity may hurt when you first start but it should not increase day by day and always stop if pain becomes more acute. Most people usually attain some pain relief after 6-8 weeks.
- If you experience pain which persists or gets worse on the following day you may have increased your intensity or your session time too quickly.
- If you have difficulty moving the joint in full range of motion, do not use additional weights. You may benefit from Physiotherapy support.
- If your joints become hot or swollen, leave out strengthening exercises until it settles down again.
- Ice packs wrapped in a damp towel should be applied to painful joints if you feel that you have overdone things or if the joint is swollen after exercise. See your doctor if symptoms are more than what you would expect or if things do not settle down.

**If you have any other long term health conditions, ask your healthcare professional and/or visit www.prescription4exercise for additional useful safety considerations.**

---

This leaflet has been provided for information only. ALWAYS check with your doctor if you have any concerns about your condition or treatment. Prescription4exercise.com is not responsible or liable, directly or indirectly, for ANY form of damages whatsoever resulting from the use (or misuse) of information contained in or implied by this information.