

## Information on exercising with hip and knee Osteoarthritis (OA)

### Is it safe to exercise if I have pain?

- It is normal to experience some pain/discomfort during exercise. In fact, feeling some pain during exercise may help reduce your joint pain in the long term.
- Joint pain often relates to it not being used to movement and the muscles being weaker and deconditioned. Pain is NOT a sign that the exercises are causing tissue damage. You need to exercise so you become stronger and able to get on with day to day life more easily.
- Remember it is normal to feel some soreness in the muscles for a few days when you start to exercise or increase the intensity of your exercise. This is actually a good sign as it means you have worked your muscles and they will get stronger.

### How can exercise help pain?

- Doing painful exercises may change the way your brain processes pain and the way you think about pain, helping you to re-start movements that you were previously fearful of.
- Exercise triggers the brain to release chemicals (endorphins) that have an analgesic (pain relieving) effect - exercising at an intensity that causes some pain may release more endorphins than pain-free exercise!

### What types of exercise are good for joint pain?

Joints need a combination of the following types of exercise:

- Movement and stretching
- Strengthening for the surrounding muscles
- Aerobic or cardiovascular exercise - the kind that increases your heart rate and breathing rate

The accompanying sheet shows a range of exercises mainly aimed at increasing strength. You should start by choosing between three and six exercises. There are ideas on how you can adapt the exercise to suit you by making it easier and harder. The last five exercises are stretches to improve movement.

### How can I do Aerobic exercise?

Examples of aerobic exercise include walking, cycling and swimming. The first 3 exercises on your sheet work your whole body and can be used as a form of aerobic exercise. When doing aerobic exercise you should aim to keep working for at least 10minutes at a time.

### How much Aerobic exercise should I do?

- Health experts tell us we should all do at least 150minutes of aerobic exercise every week. Some people might chose to complete this as doing a 30minute brisk walk 5 days each week.
- A lot of people are not doing anywhere like these amounts so don't panic if this includes you, start gently and gradually increase your daily activity.
- People who do at least 6,000 steps a day have been shown to be at lower risk of worsening joint pain.
- Activity tracking using an App on your mobile phone or a wrist worn device can be a useful way of monitoring your physical activity levels.

## How often should I do strengthening exercises?

To get the most benefit strengthening exercises should be done two to three times every week. Rest days between strength training are an important part of the strengthening process.

## How hard should I be working during exercise?

- To get stronger you will need to feel like the exercise is 'hard' or 'very hard' when you do it. If it feels easy you will probably not gain any strength.
- When you first start exercising, pain may limit your exercise intensity. Try to find a balance between an acceptable pain level and sufficient intensity. With time you should be able to tolerate working harder.
- As you get stronger, it is important you change and progress your exercise programme over time to make it challenging enough.
- You can use the following scale to check if you are working hard enough:

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

## How many times should I repeat a strength exercise?

- The number of times you do an exercise in one go is normally referred to as repetitions. When doing strength exercises you would normally then have a rest of 60 to 90 seconds before repeating the exercise - each group of repetitions is referred to as a set.
- The number of repetitions and sets you use will depend on how much resistance you are using, how used to exercise you are and how strong you are.
- You will get the most strength gain if you use enough resistance that you feel tired by the time you have done five to six repetitions but working this hard is likely to make your muscles sore so may not be the best place to start if you have never done strengthening exercises.
- If you are new to strength exercises find a level where you can manage 8-12 repetitions.
- You should aim to do three to five sets of each exercise.
- Examples of adjusting exercises to ability:

Ability	Exercise description	Resistance	Repetitions	Sets
Beginner	Squat	None	X 12	X 3
Regular exercise participant	Squat	10kg weight	X 5	X 5

## My pain is worse today, what should I do?

- It is normal for people with joint pain to find their pain levels fluctuate. An increase in pain is often referred to as a flare up.
- Flare ups DO NOT indicate that your joint condition is worse but can make it difficult to get on with day to day life.
- Adjusting your exercises to make them easier is a sensible way to cope. It is best to try NOT to stop exercising altogether.
- If you feel that exercise has caused a flare up of your pain you should adjust your exercises to make them easier.
- Complete rest is unlikely to resolve the problem so try to keep doing some exercise however gentle.

## When will things start to improve?

- Changes in strength take six to eight weeks of regular exercise so you may not notice significant changes very quickly.
- Setting goals can be a useful way to monitor your progress and keep motivated by focusing on what is important to you.
- It is important not to set too harder goal so you don't become disheartened, but at the same time make sure it is something that is important to you.
- Try to make your goal measurable e.g. Not "I want to walk more" but "I want to be able to walk for 15minutes before I need to rest". Or "I want to be able to walk to my local shop and back home again".
- Writing down how you are doing with your exercises in an exercise diary is another way you will be able to measure your improvement. We have included an exercise diary in your pack for this purpose. It is useful to plan ahead what days and times you will exercise - start each week by mapping this out on your diary. Often people find it is easier to remember their exercise by doing it at the same time. You can set a reminder on your phone to help you whilst you are getting used to it.

Example planner:

### Week 1 planner and exercise diary

Weight: 12 stone

Goal: To do my exercises 3 days this week and manage 5,000 steps every day

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time:	9am		9am			9am	
Exc 2	1min		1min			1min	
Exc 5	30secs x 3		30secs x 3			30secs x 3	
Exc 8	No weight x 10 x 3		No weight x 10 x 2			No weight x 10 x 3	
Exc ___							
Exc ___							
Exc ___							
Physical	5200	Cycled	5600 steps	Cycled	5250	3020	4500

activity:	steps	10mins		10mins	steps	steps	steps
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## Sources of information

World Health Organisation recommendations for exercise:  
[www.who.int/dietphysicalactivity/physical-activity-recommendations-18-64years.pdf?ua=1](http://www.who.int/dietphysicalactivity/physical-activity-recommendations-18-64years.pdf?ua=1)  
PEAK programme training, University of Melbourne, Australia.

## Important information

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## Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team - Tel: 0300 131 4731 or by email at: [esh-tr.patientexperience@nhs.net](mailto:esh-tr.patientexperience@nhs.net)

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After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

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## Reference

The following clinicians have been consulted and agreed this patient information:  
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