

# OA Class Education

## Osteoarthritis

### Session 1 - Osteoarthritis

Arthritis is a natural ageing process. Like grey hair and wrinkles. We have changes happening on the insides of our bodies as well as the outside.

#### The characterisation of Osteoarthritis:

- The cushioning between the knee known as cartilage gradually roughens and becomes thin and the bone underneath thickens.
- The bone at the edge of the joint grows outwards (this forms osteophytes or bony spurs)
- There may be extra fluid produced by the lining of the joint fluid causing swelling.
- The ligaments which help to support the joint slowly thicken and contract
- Muscles that move the joint may weaken and become thin or wasted

#### What is hip or knee Osteoarthritis (OA)?

Arthritis may also be described as normal wear and degeneration. This may have been identified following an assessment of the joint or via an x-ray.

Being diagnosed with osteoarthritis does not necessarily mean your condition will get worse.

Osteoarthritis is a natural aging process (like grey hair or wrinkles). It is most common in the hip and the knee joint.

Secondary arthritis can occur in the younger population if there has been previous trauma, or in the case of the hip, dysplasia (congenital abnormality of the joint).

#### Symptoms of osteoarthritis of are:

- Pain
- Stiffness (especially after rest – this usually eases after as you get moving)
- Crepitus, a creaking, crunching or grinding sensation when you move the joint
- The knee may have hard swellings (caused by osteophytes)
- Knees may have soft swellings (caused by extra fluid in the joint).
- Knees/hips may give way because your muscles have become weak
- The muscles around your joint looking thin or wasted.

Some people find that changes in the weather (especially damp weather and low pressure) make their pain and stiffness worse. This may be because nerve fibres in the capsule of their knee are sensitive to changes in atmospheric pressure.

## Important points to remember

- Arthritis is a normal ageing process
- There are things you can do to improve and manage your symptoms
- One of the single highest risk factors for developing osteoarthritis is being overweight.  
If you have osteoarthritis and are overweight, then the disease will likely progress at a higher rate.

## Session 2 - What can I do to help me better manage my symptoms?

You'll probably find that your pain will vary and that you have good days and bad days, sometimes depending on how active you've been but sometimes for no clear reason.

There are some things you can try to help reduce the symptoms:

### Heat and Ice

The use of heat can help with pain and muscle relaxation. Use a warm water bottle, or microwavable wheat bag, following the instructions provided when you purchased it. To protect your skin from heat burns, wrap the item in a few layers of towel. Leave in place for 10-15 minutes. It can be reapplied after 2 hours if you wish.

The use of ice can help with pain and inflammation. Use crushed ice cubes or a bag of frozen peas. Protect the skin from an ice burn by placing the ice pack in a wet towel. Leave in place for 10-15 minutes. It can be reapplied after 2 hours if you wish. It's normal for the skin to become pink with either heat or ice, however if you experience discomfort or a burning sensation remove the item immediately.

Do not apply heat or ice packs if you have poor skin sensation or poor circulation if you are diabetic or over areas of infection.

### Reducing your stress levels

It is well researched that increased stress levels can also increase our ability to feel pain. This is due in part to the action of adrenaline and cortisol within our bodies, our "fight and flight hormones".

#### 1. Cut down on alcohol, caffeine, and nicotine

Alcohol is a depressant and caffeine or nicotine act as stimulants. Keep yourself well hydrated by drinking water or try herbal teas. Research shows that these do not increase cortisol levels, which tend to contribute to stress.

#### 2. Work off stress with physical exercise

Exercise reduces adrenaline levels and produces "happy hormones" (endorphins & enkephalins) within our brains.

#### 3. Get enough sleep

Sleep is essential for the body and mind to function properly. Having a relaxing routine before bed has been found to be beneficial. We all need differing amounts of sleep especially as we get older. See 'Getting a good night's sleep' - [Getting a good night's sleep A4 \(cht.nhs.uk\)](http://cht.nhs.uk)

#### 4. If you are having a flare up or feel ill - REST

Don't carry on regardless. Recognise your limits. Don't carry on as if you were firing on all cylinders, as this may prolong your flare up.

#### 5. Learn how to say "NO"

This is simple but effective. Where "NO" is an appropriate response, say it without feeling guilty.

## 6. Acceptance

Learn to accept what you cannot change. A well-known quote asks, “for serenity to accept the things I cannot change, courage to change the things I can, and wisdom to know the difference”. This philosophy can help acceptance of the situation. Focus on the positives.

## 7. Manage your time and take time out

Plan your time. Allow time for the enjoyable as well as the essential things in life. Pace yourself. Break tasks down into smaller parts. Remember there is always tomorrow. Setting ourselves too much to do in a day creates stress.

## 8. Look around you

Mindfulness is living in the moment and focussing on one activity. Forget multi-tasking. Look around you and enjoy colours, views, sounds, and smells.

## 9. Listen to music

Some music calms the heart rate. Research has shown that 30 minutes spent listening to classical music may produce the same calming effects as 10mgs of Valium!

## Session 3 - Medication and Pain Management

Always speak to your GP or Pharmacist before taking any medication or using any topical creams.

There are many types of drugs that can be used to help reduce pain, they act in slightly different ways, and as with all drugs they are not suitable for everyone. Below is some information about the most common drugs.

### Paracetamol

Paracetamol is normally offered as a first line pain killer. It is best taken regularly to help manage the pain rather than ‘now and again’ when the pain flares up. It has relatively few side-effects and often gives adequate pain control. Please do not exceed the dosage advised on the packaging.

### Anti-Inflammatory Painkillers (NSAIDs)

#### Topical

Some anti-inflammatory painkillers are available as creams or gels that can be applied directly to the affected area to relieve pain and inflammation. They can be used instead of, or in addition to paracetamol. Some of these are available over the counter without a prescription. A topical preparation of an anti-inflammatory painkiller has fewer side-effects than anti-inflammatory tablets.

#### Oral

Anti-Inflammatory painkillers taken orally are prescribed less frequently than paracetamol because they have a higher risk of side-effects. However, if paracetamol and topical anti-inflammatory painkillers do not work oral anti-inflammatories can be an option. These tablets can be taken instead of, or in conjunction with paracetamol. There are many different options e.g., Ibuprofen, Naproxen, Diclofenac you can try.

### **Do not use topical and oral NSAIDs together**

\*If you are taking any new medication, ask your local pharmacist for advice.

## Session 4 - Physical Activity

Keeping active is important even when you feel you cannot do much. Trying to get a good balance between everyday activity, exercise, and rest will help reduce pain, and stiffness.

### Activity Modification

Modify activities that aggravate your symptoms. Try to carry on with your normal activities as much as you can, but do not overdo it, and respect your pain. You could consider pacing of activities (described later). Use alternate methods to ease the load on the affected area, examples below:

#### At home:

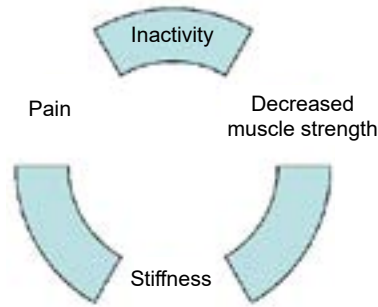
- When doing household tasks, such as vacuuming, keep an upright posture with the vacuum close to your body. Use short sweeping movements.
- When ironing, only do essential items and make sure the ironing board is at waist height.
- Use a shopping trolley or backpack to carry shopping. Consider dividing the weight of shopping into two bags and carry in each hand. The aim is to spread the load evenly.
- Ask friends or family with transport to help with your heavy items of shopping, or use delivery services if available.
- Avoid over reaching into the top cupboards, or bring heavy items to lower levels to reduce the load on the shoulder, or step forward to use the bigger stronger muscles in your legs for extra support.
- Limit the amount of time spent sitting down, looking at tablets or mobiles to reduce the strain on the neck and shoulder.
- Overall, with all tasks allow extra time, seek support for more repetitive jobs and/or regular breaks and change position/tasks as much as able.
- Use the handrail when completing stairs/steps to help reduce the load through the joints.
- When kneeling use a cushion/kneeling pad to reduce the pressure on the knee.
- If you struggle getting up from the floor, have a chair near to you and use it to help push you up from the floor.
- Try not to sit with your legs bent/straight for too long to prevent joint stiffness. Move regularly.
- When walking, consider the use of a stick/crutch/walking pole to help make your walking more even. Hold it in the opposite hand to the affected leg.

#### At work:

- Maintain a good sitting posture when sitting or standing. Avoid holding your head in fixed or twisted postures.
- Try to move around the office/home as much as possible if your work is desk based. Ensuring you move your neck and shoulders regularly to keep them loose and mobile.
- When using a computer keyboard and monitor, keep them directly in front of you to avoid turning the head or twisting the body.
- Consider a workstation assessment. We have a detailed leaflet on '**How to sit safely at work**' additional information can be found here: [How to sit safely at work A4](#) .
- When using a phone don't hold the receiver to your head with your shoulder, try to get a headset or hands-free device.
- Avoid manual work that is painful and look for support from your employer for modified duties at work – your GP/First Contact Practitioner will be able to support this.
- When kneeling use a cushion/kneeling pad to reduce the pressure on the knee
- If you struggle getting up from the floor, have a chair near to you and use it to help push you up from the floor.

## Session 5 - Pacing

When you experience pain you may as a result reduce your activity levels which will lead to muscle weakness and increased joint stiffness that in the long term can ultimately increase your pain. Pacing can help you to break out of this cycle.



### What is pacing?

Pacing allows you to stay active by altering your daily activity patterns, splitting up tasks, and taking regular breaks before pain starts. Pacing is excellent in theory but putting it into practice involves a little bit of forward planning and trial and error! The emphasis is about staying active but not overdoing it.

**For example**, on a bad day staying at home and have your friends visit you, and on a good day you may want to take the bus and meet them for a coffee. Additionally, if you need to weed the garden, don't do it all at once, split it up over a few hours or even come back to it the next day.

Some people fall into the trap of doing too little in the short term to avoid their pain.

A useful technique to use is the **“CPR of pacing”**

**Clarify** - Is a particular activity or doing the activity for too long causing your pain to worsen?

**Prioritise** - What activities are essential and what can be done later? Set realistic goals or targets for you to achieve.

**Rest** - Remember to pencil in time for rest, it allows the muscles and joints time to recuperate and you to catch your breath.

## Session 6 - Exercise

### Strength exercises

A natural response to pain is to avoid activity in fear of further damage. However, if you are inactive this results in stiff joints and weak muscles which increases the load placed upon the joint and can aggravate your pain. It is important to keep your joints moving to reduce stiffness and improve muscle strength which will help support the joint and manage your pain. It will also help you maintain a healthy weight reducing the stress being placed on the joints.

You need to find the right balance between exercise and rest. A little and often approach works well for joint pain.

### Balance exercises

- Helps with joint stability and can improve mobility and confidence.

### Endurance exercises

- Exercise to raise your heart rate can help improve your heart and lung health and stimulate the production of “endorphins” which are the body's own natural painkillers and feel-good hormones.
- Endurance exercises are also good for our muscles and their ability to work over a longer period before getting tired.
- It is recommended to work towards achieving 30 minutes of this sort of exercise per day. Remember it can be broken down into smaller more manageable chunks.

Examples include walking, cycling, bowling, swimming / aqua-aerobics, a round of golf.

## UK Government Physical Activity Guidelines



### Session 7 - Healthy Living Support

Research has shown that obesity, smoking, and physical inactivity are linked to inflammation and pain in muscles, tendons and joints. Making lifestyle changes can help improve and prevent pain.

It is also important to consider your mental health. Being in pain can affect your mood and can sometimes cause anxiety. Equally, your mood can affect the pain you feel. There is a lot of support out there to help you with physical and mental wellbeing, follow the links below for more information.

[NHS Live well \(Live Well - NHS \(www.nhs.uk\)\)](https://www.nhs.uk)

[Keeping Active and Healthy \(Benefits of exercise - NHS \(www.nhs.uk\)\)](https://www.nhs.uk)

Did you know your GP practice has a social prescribing service?

**Social Prescribing** is a free and confidential service within your practice. It can help you to have more control over your own health and find ways to improve how you feel in a way that suits you. A social prescriber is someone you can talk to confidentially who is practical and helpful and will not judge you. You can make an appointment with your social prescriber link worker through your GP practice.

### Diet and Nutrition

It is common knowledge that good nutrition, and a balanced diet are important for maintaining overall health and play an important role in managing back pain. Most of us are not eating enough fruit and vegetables each day, guidance suggests that fruit and veg should make up a third of our diet. 5 pieces of fruit and veg are recommended daily.

Likewise, calorie intake is often exceeded - females are recommended 2000kcal per day and males 2500kcal per day.

Good nutrition is essential in helping to prevent illness and injuries, and promote quick and effective recovery and healing. Keeping our bodies at a recommended and steady weight reduces stress on our joints. If you are overweight, a weight loss programme can be effective in managing joint pain.

- 1) **Keep active** – people who are healthy and active have fewer joint pains. Obesity causes increased stress on the body, increases inflammation, and increased sensitivity to pain.
- 2) **Fats should be used in moderation** – Simple carbohydrates e.g., fizzy drinks, white carbs bread are quickly digested and not a good energy store, they may give us an initial energy rush but then make us feel sluggish. The best carbohydrates are complex carbohydrates such as whole grains, natural fruit, and vegetables. These help to maintain a good immune system to help manage pain.
- 3) **Drink enough water** – dehydration can cause muscle spasms and cramp, it can also make us feel more hungry. You need to drink plenty of fluids to stop yourself getting dehydrated. Aim for around six to eight glasses of fluid per day (a minimum of 1.5 litres). All non-alcoholic drinks count, but water, lower fat milk, and lower sugar drinks including tea and coffee, are healthier choices.

The average recommendation is 8 large glasses of water per day. Review what you are drinking each day, only one cup of coffee, or two cups of tea are recommended, and fizzy/sugary drinks should be kept to a minimum. If you intend on changing what you are drinking, gradually reduce and substitute your tea/coffee/sugary drinks to avoid caffeine headaches.

- 4) **Avoid smoking** – nicotine is harmful in many ways. There is evidence suggesting that smoking has an effect on the vascular structures of the discs and joints in the back. Nicotine also inhibits bone growth.
- 5) **Avoid excessive alcohol** – alcohol is a depressant which contributes to the development of pain. Alcohol adds unneeded sugar to the diet which can contribute to weight gain and obesity.

## The Right Food for Optimal Nutrition

Vitamin or Mineral	Role	Food source
Vitamin A	<ul style="list-style-type: none"> <li>• Antioxidant assists the immune system in fighting off disease.</li> <li>• Helps repair tissue and formation of bone</li> </ul>	Eggs, oily fish, liver, dairy products, yellow fruit (mango, papaya, apricots), yellow, red, and green veg (spinach, carrot, sweet potatoes)
Vitamin B12	<ul style="list-style-type: none"> <li>• Necessary for healthy bone marrow and red blood cell production. Maintain a healthy nervous system function</li> </ul>	Meat, poultry, and dairy products, fortified cereal
Vitamin C	<ul style="list-style-type: none"> <li>• Necessary for development of collagen. Important for healing problems caused by injury to tendons, ligaments, and vertebral discs.</li> <li>• Keeping bones and tissues healthy</li> </ul>	Citrus fruits, peppers, broccoli, strawberries, potatoes, blackcurrants
Vitamin D	<ul style="list-style-type: none"> <li>• Helps to improve calcium absorption to help in prevention of osteoporosis.</li> </ul>	Egg yolks, oily fish, fortified milk/spreads, sunlight
Vitamin K	<ul style="list-style-type: none"> <li>• Some evidence it helps to keep bones healthy.</li> <li>• Wound healing</li> </ul>	Liver, pork, green leafy veg, vegetable oil
Iron	<ul style="list-style-type: none"> <li>• Needed to help red blood cell production that are responsible for transporting oxygen around the body</li> </ul>	Liver (avoid during pregnancy), red meat, lentils, beans, eggs, grains, green veg
Magnesium	<ul style="list-style-type: none"> <li>• Helps muscles to relax and contract. Maintains muscle tones and bone density. Assists in use of protein</li> </ul>	Whole grains, beans, seeds, nuts, potatoes, bananas, shrimp, green veg
Calcium	<ul style="list-style-type: none"> <li>• Essential for bone health and maintain bone mass.</li> <li>• Prevention of osteoporosis</li> </ul>	Dairy products, dark green veg, black beans, bread made with fortified flour

NHS. (2023). Vitamins and minerals: Vitamin A. NHS. <https://www.nhs.uk/conditions/vitamins-and-minerals/vitamin-a/>

## Eat Well Guide (Change4Life NHS Choices)



## Session 8 - Relaxation

- Our bodies' natural relaxation response is a powerful antidote to the stresses of our lives. Relaxation techniques are varied, and you need to find the one that works best for you.
- The relaxation response is not about lying down on a couch, sleeping or being lazy. It is a mentally active approach that leaves the body feeling relaxed. It is best done in a wakeful state. It takes practise to learn and the benefits increase with practise.
- We can't avoid all stress, but we can reduce its effect by practising relaxation techniques. With stress there is an increase in our adrenalin and cortisol levels-- our "fight and flight" chemicals. These are useful to get us out of true emergency situations where we need to be alert and responsive, but it wears you down if these chemicals are being drip-fed all the time.
- In addition to calming us physically, research shows that relaxation also increases our energy, motivation, and ability to focus. It combats illness, relieves aches and pains, and allows us to think more clearly, aiding our ability to problem solve.

# Relaxation Techniques

## Breathing exercises

Breathing is the foundation for human life. It gives us vital oxygen that is required for many essential body processes. It also helps remove carbon dioxide from our body.

Our breathing pattern can be affected by many factors such as: lung disease, stress, and anxiety. We can learn to use our breathing as a powerful and effective tool to help us manage shortness of breath, reduce muscle tension, stress, and relieve anxiety and pain.

There are several breathing techniques we can learn. As with all new skills, it is important to practice, and then it will become more natural to us.

### 1. Mindfulness of breathing

Practising mindfulness of breathing can help with physical and mental relaxation.

It uses our breath as an anchor for our attention. We always have our breath with us and we can practice this technique anywhere.

**Focus your attention on your breathing but don't alter the pattern of your breathing**

**Pay attention to the movement of air through the mouth and nose**

**If your attention wanders to thoughts in your head – notice them, and then return to the cycle of breathing**

**If your attention is distracted by external sounds – notice them and return to the cycle of breathing**

### 2. Pursed lip breathing

Pursed lip breathing is one of the simplest ways to manage breathlessness and anxiety. It helps to release trapped air from the lungs and decreases the work of breathing. If practised regularly, it can become a good way of taking control of our thoughts and our breathing. It can provide a small dose of relaxation whenever we need it.

Once we feel comfortable using the new technique we can try it out in real situations, such as sitting in a traffic jam, waiting in a queue at the shops, or when trying to get to sleep.

**Sit comfortably in your chair, allowing your hands to rest gently on your thighs**

**Relax your neck and shoulder muscles by pulling your shoulders down and then releasing them**

**Now, keeping your mouth closed, breathe in gently through your nose for a count of two...**

**Breathe out slowly and gently through pursed lips for a count of four....**

**(Imagine you are gently blowing out to flicker the flame of a candle or to whistle quietly)**

**Continue breathing rhythmically like this, making the out breath last a little longer than the in breath.**

**In, one...two... Out, one...two...three...four...**

**Be aware of allowing a space between the out breath and the in breath**

**Continue like this for a few more breaths and then breathe normally**

### 3. Diaphragmatic breathing

The diaphragm is a large dome-shaped muscle which separates our chest and abdominal cavities. It plays an important role in our breathing. In some people, the diaphragm does not work efficiently. This may be due to various reasons such as lung disease, pain or anxiety.

We can learn a technique to help us use our diaphragm more effectively.

You may notice it takes increased effort to breathe like this at first, but with practice it will become easier and more automatic. You could practice this technique for several minutes 3 or 4 times each day.

Some people find it easier to do this whilst lying down, supported by pillows.

**Sit comfortably with your legs uncrossed and your shoulders relaxed**

**Place your hand on your abdomen, with your little finger near your belly button - your hand will be resting over your diaphragm**

**Place your other hand on your upper chest**

**Allow your breath to come in and out naturally - notice how you are breathing...**

**With your in breath, be aware of your diaphragm rising under your hand and your abdomen expanding gently - the hand on your chest should hardly move at all**

**In your own time, sigh out through your mouth**

**As you breathe in again, imagine your lungs being filled with fresh air**

**Allow your diaphragm to help you, by pulling the air in and pushing it out - feel the movement...**

**You may wish to combine this technique with the pursed-lip breathing on the out breath.**

**You may feel slightly heavier as you do this exercise and that you are more relaxed**

**Imagine your breath reaching lower and lower down in your body**

**Carry on breathing like this for a while, allowing the breath to come naturally and evenly**

## **Progressive Muscle Relaxation (PMR)**

PMR is a process in which we systematically tense and relax the different muscle groups within our bodies. It allows us to become aware of the difference between tension and relaxation in our body. You can combine this with diaphragmatic breathing for additional relaxation.

Sit comfortably, make sure you loosen any tight clothing and take off your shoes.

**Take a few moments to relax, breathing in and out slowly**

**Shift your attention to your feet - notice how they feel**

**Slowly tense the muscles - squeeze as tightly as you can and then let go of the tension**

**Feel the difference, as the tension flows away and the feet become loose and relaxed**

**When you are ready move to the next muscle group and progress slowly through your body**

**A sequence to follow could be:**

- Feet
- Calves
- Thighs
- Buttocks
- Abdomen
- Hands
- Shoulders
- Face – clenching the teeth & screwing up the eyes

Notice the difference between the relaxed muscle and the tense muscle. This type of body check can be done at any time we feel tension.

## Web Address:

<http://www.cht.nhs.uk/services/clinical-services/physiotherapy-outpatients/patient-careinformation/>

Or google "CHFT outpatient physiotherapy"

Or scan the QR code below to take you to our website.



**If you have any comments about this leaflet or the service you have received you can contact :**

Outpatient Physiotherapy  
Bowling Mill, Dean Clough  
Halifax HX3 5AX

Telephone: **01484 343816**

[www.cht.nhs.uk](http://www.cht.nhs.uk)

**If you would like this information in another format or language contact the above.**

Potřebujete-li tyto informace v jiném formátu nebo jazyce, obraťte se prosím na výše uvedené oddělení

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ਬ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਪ੍ਰਾਚੂਪ ਜਾਂ ਭਾਸ਼ਾ ਵਿੱਚ ਲੈਣਾ ਚਾਹੁੰਦੇ ਹੋ,  
ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਉਪਰੋਕਤ ਵਿਭਾਗ ਵਿੱਚ ਸਾਡੇ ਨਾਲ ਸੰਪਰਕ ਕਰੋ।

اگر آپ کو یہ معلومات کسی اور فارمیٹ یا زبان میں درکار ہوں، تو  
برائے مہربانی مندرجہ بالا شعبے میں ہم سے رابطہ کریں۔

"إذا احتجت الحصول على هذه المعلومة بشكل مغاير أو مترجمة إلى لغة مختلفة فيرجى منك الاتصال بالقسم  
المذكور أعلاه"