

Condition

# Osteoarthritis



**VERSUS  
ARTHRITIS**

# WE'RE VERSUS ARTHRITIS

We're the 10 million people living with arthritis. We're the carers, researchers, health professionals, friends and parents all united in our ambition to ensure that one day, no one will have to live with the pain, fatigue and isolation that arthritis causes.

We understand that every day is different. We know that what works for one person may not help someone else.

Our information is a collaboration of experiences, research and facts. We aim to give you everything you need to know about your condition, the treatments available and the many options you can try, so you can make the best and most informed choices for your lifestyle.

We're always happy to hear from you whether it's with feedback on our information, to share your story, or just to find out more about the work of Versus Arthritis. Contact us at [content@versusarthritis.org](mailto:content@versusarthritis.org)

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**Words shown in bold are explained in the glossary on p. 45**

# MEL'S STORY

## I was diagnosed with osteoarthritis in my knees and hands when I was 43.

I'd had some knee problems a few years before and I thought it was because I was standing all day in my job. It was worse when I woke up in the morning. The pain when I walked upstairs was excruciating. And with my hands it was terrible. I would struggle to do things like open doors, tie my laces or put the top on a bottle of water.

My doctor did blood tests and I was then referred to the rheumatology department at the hospital. The rheumatologist told me it was osteoarthritis. When someone tells you that you have arthritis, it's awful. But I'm stubborn and determined. I won't let arthritis determine what I can and can't do.

I joined the gym in the March of 2014. It was obvious then that there were only certain things that I could go on, but I did a Pilates class once a week and that was good for flexibility.

I met Shane, a personal trainer at the gym I go to – I like Shane's approach that if something hurts, you find something else to do. Even if you just wake up in the morning and walk to the shops at the end of the road, that's ok. You can then walk a bit further over the course of a few days or weeks. After three weeks with Shane, I could already walk upstairs without any pain.

It's tough, and it may take time, but it's about making that first step. I wasn't really exercising much before, but I couldn't imagine not exercising now. Once I got started, I became curious about how much I could do. I find that if I don't do anything, it starts to hurt more, because everything starts to stiffen. It can be a vicious circle; if I seize up, I find it harder to start exercising again!

As well as becoming more active, I decided to take a good look at what I was eating. I've drastically improved my diet. I started eating only good food and got rid of all the rubbish. I feel so much better. Even though I know how much I've improved, I still have arthritis and I know it's there. I don't take painkillers now, because I would rather be exercising and just go down that route.

Everyone's different, but my advice would be to get out there and do something, anything, and just keep doing it. Set yourself realistic targets and just keep pushing yourself a little bit more.



## What is osteoarthritis?

Osteoarthritis (os-tee-o-arth-ri-tus) is a very common condition of the joints. It's most common in people over the age of about 45, but younger adults may sometimes develop it.

It can affect any joint in the body. However, it's most likely to affect the joints that bear most of our weight, such as the knees and hips. Joints that we use a lot in everyday life, such as the joints of the hand, are also commonly affected.

A joint is where two or more bones meet. In a healthy joint, a coating of tough but smooth and slippery tissue, called cartilage, covers the surface of the bones and helps the bones to move against each other without friction.

When a joint develops osteoarthritis, part of the cartilage thins and the surface becomes rougher. This means the joint doesn't move as smoothly as it should. If the cartilage becomes badly worn, the bones may begin to rub against each other and eventually wear away.

When cartilage becomes worn or damaged, all the tissues within the joint become more active than normal. Experts in osteoarthritis often use the term 'wear and repair' to describe these processes.

The repair processes may change the structure of the joint but will often allow the joint to work normally and without any pain and stiffness. Almost all of us will develop osteoarthritis in some of our joints as we get older, but it doesn't always cause pain and we may not even be aware of it.

However, the repair processes don't always work so well and changes to the joint structure can sometimes cause or contribute to symptoms such as pain, swelling or difficulty in moving the joint normally.

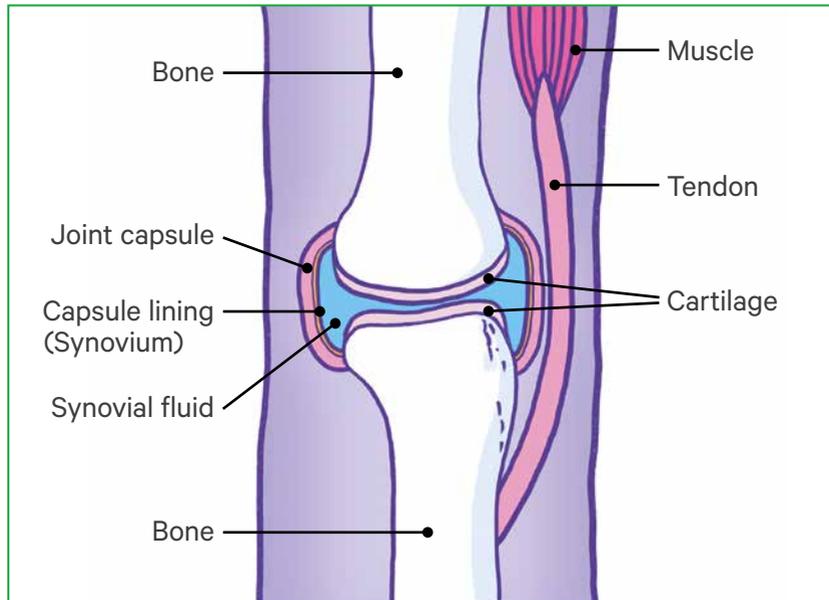
For example:

- Extra bone may form at the edges of the joint. These bony growths are called osteophytes (os-tee-o-fites) and can sometimes restrict movement or rub against other tissues. In some joints, especially the finger joints, these may be visible as firm, knobby swellings.
- The lining of the joint capsule, called the synovium (sin-o-vee-um), may thicken and produce more fluid than normal, causing the joint to swell.
- Tissues that surround the joint and help to support it may stretch so that after a time the joint becomes less stable.

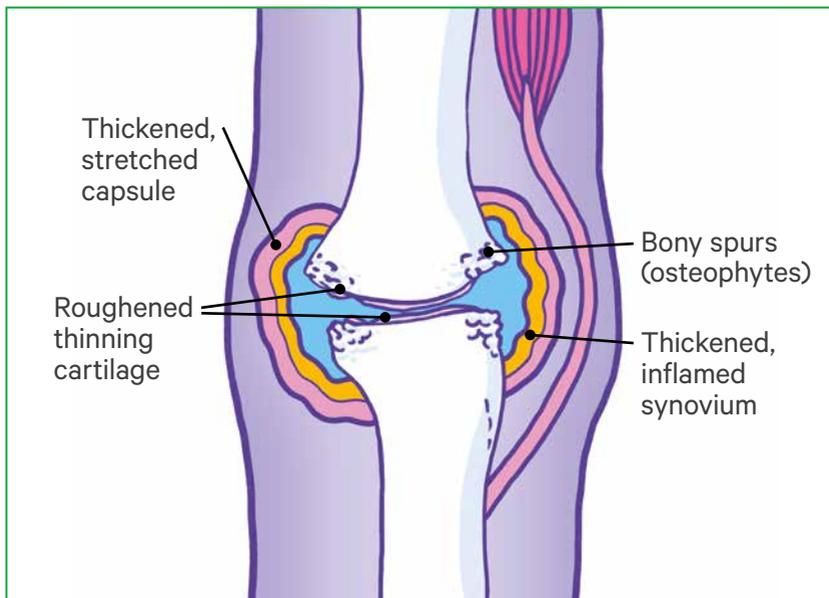
See Figures 1 and 2 on p. 8.



**Figure 1:** A healthy joint



**Figure 2:** A joint affected by osteoarthritis



## What are the symptoms of osteoarthritis?

The main symptoms of osteoarthritis are pain and sometimes stiffness in the affected joints. The pain tends to be worse when you move the joint or at the end of the day. Your joints may feel stiff after rest, but this usually wears off fairly quickly once you get moving.

Symptoms often vary for no obvious reason – you may have bad patches lasting a few weeks or months, followed by better periods. Or you may find that your symptoms vary depending on what you're doing or how long you do it for.

The affected joint may sometimes be swollen. The swelling may be:

- hard and knobbly, especially in the finger joints, caused by the growth of extra bone
- soft, caused by thickening of the joint lining and extra fluid inside the joint capsule.

The joint may not move as freely or as far as normal, and it may make grating or crackling sounds as you move it. This is called crepitus.

Sometimes the muscles around the joint may look thin or wasted. The joint may give way at times because your muscles have weakened or because the joint structure has become less stable. Exercises to strengthen the muscles that support the joint can help to prevent this.

Don't delay going to see your GP if you have joint pain or stiffness. Getting a diagnosis early will give you the chance to discuss treatment and self-help options and give you the best chance of managing your condition effectively.

## What causes osteoarthritis?

Although research is improving our understanding of osteoarthritis, it's still not clear exactly what causes it. We do know it isn't simply 'wear and tear' and that other factors either increase or reduce an individual's risk of developing osteoarthritis. It's often a combination of the factors below that lead to osteoarthritis:

### Age

Osteoarthritis usually starts from the late 40s onwards, though younger people may occasionally develop it. It's not known exactly why older people are more likely to develop the condition, but it may be due to bodily changes that come with ageing, such as weakening muscles, weight gain, and the body becoming less able to heal itself effectively.

### Gender

For most joints, especially the knees and hands, osteoarthritis is more common and more severe in women.

### Obesity

Being overweight is an important factor in causing osteoarthritis, especially in weight-bearing joints such as the knee and the hip. Losing some weight, if you need to, will improve the outlook.

### Joint injury

A major injury or operation on a joint may lead to osteoarthritis in that joint later in life. Normal activity and exercise don't cause osteoarthritis, but very hard, repetitive activity or physically demanding jobs can increase your risk. Exercising too soon after an injury has had time to heal properly may also lead to osteoarthritis in that joint later on.

### Joint abnormalities

If you were born with abnormalities or developed them in childhood, it can lead to earlier and more severe osteoarthritis than usual.

### Genetic factors

The genes we inherit can affect the likelihood of getting osteoarthritis at the hand, knee or hip. One common form of hand osteoarthritis that runs strongly in families is nodal osteoarthritis. This affects mainly women from their 40s or 50s onwards and causes firm, knobby swellings at several of the finger joints.

Some very rare forms of osteoarthritis are linked to mutations of single genes that affect a protein called collagen, which is found in cartilage and can cause osteoarthritis to develop in many joints at an earlier age than usual.



### Other types of joint disease

Sometimes osteoarthritis is a result of damage from a different kind of joint disease, such as **rheumatoid arthritis** (room-a-toy-d arth-ri-tus) or **gout**.

### What else might affect osteoarthritis?

Two factors that may affect the symptoms of osteoarthritis, but aren't a direct cause of it are the weather and diet.

#### Weather

Many people with osteoarthritis find that changes in the weather make the pain worse, especially when the atmospheric pressure is falling – for example, just before it rains. Although the weather may affect the symptoms of your arthritis, it's thought that the effect is small.

#### Diet

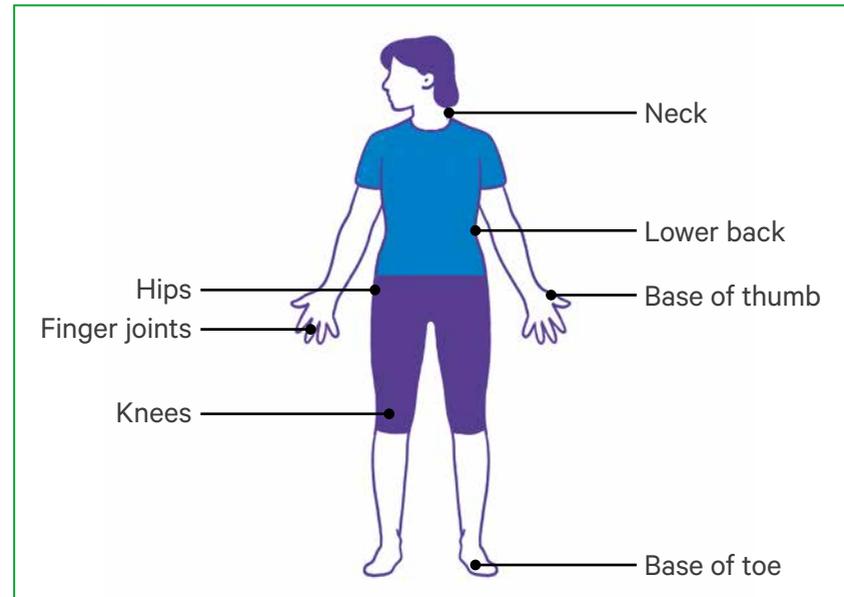
Some people find that certain foods seem to increase or lessen their pain and other symptoms. Following a healthy, balanced diet can help reduce the amount of arthritis medication needed. However, your weight is more likely than any other specific dietary factors to affect your risk of developing osteoarthritis.

**Symptoms of osteoarthritis may vary depending on what you're doing, or they may vary for no obvious reason.**

## Which joints are affected by osteoarthritis?

Any joint can develop osteoarthritis, but symptoms linked to osteoarthritis most often affect the knees, hips, hands, spine and big toes (see Figure 3):

**Figure 3:** The joints most often affected by osteoarthritis



### The knee

Osteoarthritis of the knee is very common. This is probably because your knee has to take extreme stresses, twists and turns as well as bearing your body weight. Osteoarthritis can affect the main surfaces of the knee joint or the cartilage underneath your kneecap. It often affects both knees.

### The hip

Osteoarthritis of the hip is also common and can affect either one or both hips. The hip joint is a ball-and-socket joint which normally

has a wide range of movement. It also bears a lot of your weight. Hip osteoarthritis is equally common in men and women, and usually starts from the late 40s onwards.

## The hand and wrist

Osteoarthritis of the hands usually occurs as part of the condition nodal osteoarthritis. This mainly affects women and often starts in your 40s or 50s, around the time of the menopause. It usually affects the base of your thumb and the joints at the ends of your fingers, although other finger joints can also be affected. Symptoms may come and go, but the pain often stops after several years, leaving joints that work well.

## The back and neck

The bones of your spine and the discs in between are often affected by changes that are very similar to osteoarthritis. In the spine, these changes are often referred to as spondylosis. Although they are very common, they aren't the most common cause of back or neck pain.

## The foot and ankle

Osteoarthritis of the foot generally affects the joint at the base of your big toe. However, osteoarthritis of the mid-foot is also quite common. The ankle is the least commonly affected part of the foot.

## The shoulder

The shoulder consists of two joints:

- a ball-and-socket joint where the upper arm meets the shoulder blade – this is called the glenohumeral (glen-oh-hume-eh-ral) joint and has a very wide range of movement
- a smaller joint where the collarbone meets the top of the shoulder blade, which has a much smaller range of movement and is called the acromioclavicular (ak-row-me-oh-kla-vik-you-lar) joint.

Osteoarthritis is more likely to affect the acromioclavicular joint, but can also affect the glenohumeral joint.

## The elbow

The elbow joint is one of the least commonly affected by osteoarthritis. When it is affected, it may follow either a single serious injury or a number of more minor injuries to the elbow, often as a result of a job that puts unusual strain on the elbow joint.

## The jaw

The jaw, or temporomandibular (tem-po-row-man-dib-you-lar) joint, is one of the most frequently used joints in the body and the cartilage in this joint is particularly prone to wear. Osteoarthritis of the jaw may therefore start at an earlier age than in many other joints.



## How is osteoarthritis diagnosed?

It's important to get an accurate diagnosis if you think you have arthritis. There are many different types of arthritis and some need very different treatments. The diagnosis of osteoarthritis is usually based on:

- your symptoms and the history of how they developed
- the physical signs that your doctor finds when examining your joints.

### Your history

Your GP will ask about your symptoms, how and when they started, and any factors that make your symptoms better or worse. Tell your doctor about any pain, swelling or stiffness, how your symptoms have changed over time, and how your work and daily life are affected. You should also mention any other medical conditions you have and any medicines you're taking.

### Physical examination

Your doctor will examine your joints, checking for:

- tenderness over the joint
- creaking or grating of the joint – known as crepitus
- bony swelling
- excess fluid
- restricted movement
- joint instability
- weakness or thinning of the muscles that support the joint.

## What tests are there for osteoarthritis?

There's no blood test for osteoarthritis, although your doctor may suggest you have them to help rule out other types of arthritis.

X-rays aren't usually helpful in diagnosing osteoarthritis or deciding on a treatment plan, although they may be useful to show whether there are any calcium deposits within the joint.

In rare cases, an MRI scan of the knee can be helpful. This uses high-frequency radio waves to build up pictures of the soft tissues and may also show changes in the bone that can't be seen on a standard x-ray. Its main use is to identify other possible joint or bone problems that could be causing your symptoms.

## Should I see a specialist?

It's unlikely that you'll need to see a specialist to get a diagnosis of osteoarthritis, although your doctor may refer you if there's some doubt about the diagnosis or if they think there might be additional problems. In most cases, osteoarthritis is diagnosed and managed by a GP.

It's worth knowing that guidelines issued by the National Institute for Health and Clinical Excellence (NICE) state that your GP should offer you a regular review if any of the following apply:

- your joint pain is causing you problems
- you take tablets for pain relief on a regular basis
- you have other health problems besides your arthritis
- you have osteoarthritis in more than one joint.

Your doctor may refer you if specialist help is needed to manage your osteoarthritis – this might be for physiotherapy, podiatry for foot problems, or occupational therapy, which can help if you're having difficulty with everyday activities.

If your arthritis becomes severe and is causing long-term problems, your GP may refer you to an orthopaedic surgeon to consider joint surgery or to a pain management programme.

## How will osteoarthritis affect me?

Osteoarthritis affects different people, and different joints, in various ways. But, for most people, osteoarthritis does not continue to get steadily worse over time.

For some people, the condition reaches a peak a few years after the symptoms start and then remains the same or may even improve. Others may find they have several phases of moderate joint pain with improvements in between.

Osteoarthritis can sometimes develop over just a year or two and cause a lot of damage to a joint. But more often, osteoarthritis is a slow process that develops over many years and results in fairly small changes in just part of the joint.

The degree of damage to a joint isn't very helpful in predicting how much pain you'll have. Some people have a lot of pain and mobility problems from a small amount of damage, while others have a lot of damage to the joint but few or no symptoms.

If you have severe osteoarthritis, you may find some of your daily activities more difficult depending on which joints are affected. For example:

- Osteoarthritis of the spine and weight-bearing joints (hips, knees, ankles) may cause problems with walking, climbing stairs or getting out of a chair.
- In the hands, osteoarthritis could cause problems with tasks that require a firm grip or fine finger movements, such as writing or doing up buttons.
- If the shoulder or elbow are affected you're most likely to have trouble with lifting (especially above shoulder height) or carrying weight.

More severe osteoarthritis can also make it difficult to get a good night's sleep.



## What are the possible complications of osteoarthritis?

The changes in cartilage that occur with osteoarthritis can encourage crystals to form within the joint. These may be:

- sodium urate crystals, which can cause attacks of gout. Gout causes very severe pain and swelling that develops quickly over 12–24 hours but returns to normal in a week or two. The big toe is the most commonly affected joint



**See Versus Arthritis booklet ‘Gout’ or go to:  
[www.versusarthritis.org/about-arthritis/conditions/gout](http://www.versusarthritis.org/about-arthritis/conditions/gout)**

- calcium pyrophosphate (pie-ro-foss-fate) (CPP) crystals, which can also cause severe pain and swelling that develops quickly but settles within a week or two. CPP crystals can affect any joint but are more common in joints already affected by osteoarthritis. The arthritis is more likely to become slowly worse and to be more severe when there are CPP crystals present.



**For more information on calcium crystal diseases go to:  
[www.versusarthritis.org/about-arthritis/conditions/calcium-crystal-diseases-pseudogout](http://www.versusarthritis.org/about-arthritis/conditions/calcium-crystal-diseases-pseudogout)**

## Managing your osteoarthritis

Although there’s no cure for osteoarthritis yet, there are treatments that can provide relief from the symptoms and allow you to get on with your life. Your doctor can help you to find the treatment, or combination of treatments, that works best for you. These might include:

- lifestyle changes – for example, increased physical activity, muscle strengthening exercises and weight loss (if appropriate)
- pain relief medications – for example, pain-relieving creams or gels, paracetamol, non-steroidal anti-inflammatory drugs (NSAIDs) or steroid injections
- physical therapies – for example, TENS, applying warmth, splints or other supports
- surgery
- supplements and complementary treatments.

We’ll be looking at each of these options over the following pages.

### Physical activity

Many people worry that exercising will increase their pain and may cause further damage to their joints. However, while resting painful joints may make them feel more comfortable at first, too much rest can increase stiffness.

Physical activity can:

- protect your joints by keeping the muscles that support them strong
- help to control pain
- reduce stress levels
- help you to lose any extra weight.

You shouldn’t be afraid to use your joints. If pain makes it difficult to get started with exercise, you could try taking a painkiller such as paracetamol beforehand. And if you feel you’ve overdone things

a bit, try applying warmth to the painful joint – or if it's swollen, applying an ice pack may help.

If you haven't done much exercise for a while you might want to get some professional advice from a physiotherapist. They'll be able to help you work out a programme that works for you. But it's not essential to see a physiotherapist – the information below should help. The most important thing is to start gently and build up gradually.

There are three types of exercise that you should try to include:

### **Range of movement exercises**

These are good for posture and strength as well as helping to maintain flexibility. The exercises involve taking joints through a range of movement that feels comfortable and then smoothly and gently easing them just a little bit further.

### **Strengthening exercises**

These are exercises performed against some form of resistance to strengthen the muscles that move and support your joints. You could use light weights, a resistance band or try exercising in water. Many people become less active when they develop arthritis because of a natural fear of pain and causing further damage – this can cause the muscles to weaken and even become visibly thinner, which makes it even more difficult to move the joints normally.

### **Aerobic exercise**

Aerobic exercise means any physical activity that raises your heart rate and gets you breathing more heavily. This type of exercise burns off calories, so it can help if you need to lose a bit of weight. It can also improve your sleep and energy levels, reduce pain and will be good for your general health.

Walking, cycling and swimming are all excellent forms of exercise for people with arthritis. Or you could try an exercise bike or cross-trainer. Walking laps in the shallow end of a swimming pool is also great for strengthening leg muscles.

Hydrotherapy or aquatic therapy pools are warmer than normal swimming pools. The warmth is soothing and relieves pain and stiffness, while the water supports your weight but still offers some resistance for muscle-strengthening exercises. Your doctor may be able to refer you for hydrotherapy, though unfortunately pools aren't available in all areas.

The key to building up your physical activity is to find something you enjoy. That way you'll be much more likely to keep it up. Another useful tip is to find ways of becoming more active that you can easily incorporate into your everyday life – such as doing some stretches while waiting for the kettle to boil or using the stairs a bit more often.



**See Versus Arthritis booklet 'Keep Moving' or go to:**  
[www.versusarthritis.org/about-arthritis/managing-symptoms/exercise](http://www.versusarthritis.org/about-arthritis/managing-symptoms/exercise)

## **Weight loss and diet**

The clearest link between diet and osteoarthritis is related to weight. If you're overweight, then losing even a small amount of weight can make a big difference to your symptoms – especially for weight-bearing joints (the hips, knees, back and feet).

The best way of losing weight is by following a healthy, balanced diet. Cut down on the number of calories you get from high-fat and sugary foods, but make sure that you're including all the key food groups in your diet and not missing out on essential nutrients. Gradually increasing the amount of physical activity you do can also help with weight loss.

There are many theories about what is 'good' and 'bad' to eat when you have arthritis, but there isn't a specific diet that's been proved to help. Be cautious about any diet that claims to cure arthritis or that suggests completely cutting out a particular food group.

If you think that a certain food might be making your symptoms worse then it's best to test this by not eating the food for a few weeks and then reintroducing it to see if you notice a difference. You may find it helpful to speak to a dietitian about the best way of doing this. You can ask your GP to refer you to a dietitian or you can find one through the British Dietetic Association (BDA) or the Health and Care Professions Council (HCPC).

There's some research to suggest that oily fish, or oils produced from fish, may help with the symptoms of some forms of arthritis. The research evidence on this relates mainly to rheumatoid arthritis rather than osteoarthritis but increasing your intake of oily fish or taking a supplement might still be worth trying if you're interested in using diet to manage your condition.



See Versus Arthritis booklet 'Healthy eating and arthritis' or go to: [www.versusarthritis.org/about-arthritis/managing-symptoms/diet](http://www.versusarthritis.org/about-arthritis/managing-symptoms/diet)



## Medications

The drugs usually taken for osteoarthritis won't affect the condition itself, but they can help to ease the symptoms of pain and stiffness.

### NSAID creams and gels

Non-steroidal anti-inflammatory drugs (NSAIDs) are available as creams, gels or patches that you apply directly to the skin. Ibuprofen (eye-bue-pro-fen) and diclofenac (dik-lo-fen-ak) gels are available over the counter at pharmacies and supermarkets. Others, such as ketoprofen (kee-toe-pro-fen), are only available on prescription.

Creams, gels or patches can work well for some joints, especially the knees and hands, but may not work as well for joints such as the hips, which lie deeper below the skin. They are very safe and are recommended as the first form of drug treatment to try.

### Capsaicin cream

Capsaicin (cap-say-a-sin) cream is made from the pepper plant (capsicum) and is an effective painkiller. Like NSAID creams and gels, it's particularly useful for knee and hand osteoarthritis. It's only available on prescription. It needs to be applied regularly three times each day.

The pain-relieving effect starts after several days of regular use and you should try it for at least two weeks before deciding if it's helped. Most people feel a warming or burning sensation when they first use capsaicin, but this generally wears off after several days. As with NSAID creams, gels or patches, capsaicin is very safe.

### Paracetamol

Paracetamol (pa-ra-see-ta-mol) is usually recommended as the safest type of pain relief tablet to try first. It's best to take them before the pain becomes very bad. Paracetamol is readily available over the counter at pharmacies and supermarkets – and there's no advantage in paying for more expensive brands.

### Non-steroidal anti-inflammatory drugs (NSAIDs)

NSAID tablets are generally stronger pain-relievers than paracetamol. The most common of these is ibuprofen, which is widely available in a low-to-moderate dose over the counter in pharmacies and supermarkets. You can try these for 5–10 days – if they haven't helped after this time, then they're unlikely to.

If you need them, your doctor may prescribe:

- higher doses of ibuprofen
- stronger NSAIDs such as naproxen (na-prox-sen) or diclofenac
- a newer type of NSAID, such as celecoxib (sell-eh-kox-ib) or etoricoxib (et-or-i-cox-ib), designed to reduce the risk of ulcers and bleeding in the gut.

If your doctor prescribes an NSAID, they'll usually prescribe a drug called a proton pump inhibitor (PPI) as well to help protect the gut. Examples of PPIs are lansoprazole (lan-sop-ra-zol) and omeprazole (oh-mep-ra-zol).



See Versus Arthritis booklet 'Painkillers and NSAIDs' or go to: [www.versusarthritis.org/about-arthritis/treatments/drugs/painkillers-analgesics/](http://www.versusarthritis.org/about-arthritis/treatments/drugs/painkillers-analgesics/) and [www.versusarthritis.org/about-arthritis/treatments/drugs/non-steroidal-anti-inflammatory-drugs-nsaids](http://www.versusarthritis.org/about-arthritis/treatments/drugs/non-steroidal-anti-inflammatory-drugs-nsaids)

### Stronger pain relief

If you find that paracetamol or NSAIDs don't give good enough pain relief, you should speak to your doctor about other options. Your doctor may suggest using paracetamol in combination with an NSAID. However, you shouldn't take ibuprofen as well as a prescription NSAID.

Occasionally, your doctor may suggest other combinations of drugs. For example, co-codamol (ko-ko-da-mol) contains paracetamol and codeine (ko-deen). These are normally only used for very short



periods, because opioid (oh-pee-oyd) drugs such as codeine tend to have more side effects, especially in the age group most often affected by osteoarthritis.

### Steroid injections

Injections of a long-acting steroid are sometimes given directly into a particularly painful joint. The injection often starts to work within a day or so and may improve pain for several weeks or even months, especially in your knee or thumb.

Steroid injections are mainly used for very painful osteoarthritis, or for sudden, severe pain caused by crystals in the joint. Your doctor may also be able to offer a steroid injection if you're worried about your arthritis disrupting an important event.



See Versus Arthritis booklet 'Steroid injections' or go to: [www.versusarthritis.org/about-arthritis/treatments/drugs/steroid-injections](http://www.versusarthritis.org/about-arthritis/treatments/drugs/steroid-injections)

## Medication tips

- Make sure you know how much you should be taking, how often and when. Some people will need to take medicines regularly, while others will only need them from time to time when their symptoms are worse. Are your medicines best taken with or after meals, or on an empty stomach?
- Ask if the medicine will start to work straight away or if you'll need to take it for a while before you start to notice the benefit.
- Ask about any possible side effects and make sure you know what to do if you do have side effects.
- If you're pregnant or thinking of having a baby, or if you want to breastfeed, discuss this with your doctor in case you need to stop or change your medication.
- If you're prescribed a new medicine, ask whether it might interact with anything else – including other drugs, alcohol, herbal medicines or food supplements.
- Keep a record of the drugs you're taking. Keep this with you in case you need treatment from someone other than your usual doctor. You could keep a copy of your prescription in your wallet or on your phone.

## Other pain relief treatments

### **Transcutaneous electrical nerve stimulation (TENS)**

Transcutaneous (trans-cue-tayn-ee-us) electrical nerve stimulation uses a small machine to send electrical pulses to your nerve endings through pads placed on your skin. It produces a tingling sensation and is thought to relieve pain by altering pain signals sent to the brain. The research evidence on the effectiveness of TENS is mixed, but some people do find it helpful.

TENS machines are available from pharmacies and other major stores. A physiotherapist will be able to advise on the types of TENS machine available and how to use them. Or they may be able to loan you one to try before you decide whether to buy one.

### **Hyaluronic acid injections**

Hyaluronic (hi-a-ler-ron-ic) acid, or hyaluronan, is a lubricant and shock absorber that's found naturally in the fluid in your joints. Injections of hyaluronic acid have sometimes been used as a treatment for osteoarthritis of the knee.

The treatment isn't currently available on the NHS because research evidence on its long-term effectiveness is mixed. The treatment is, however, available privately.

## Tips for managing pain

### **Warmth and cold**

Applying warmth to a painful joint can help to ease discomfort. You could use a hot-water bottle, wrapped in a towel to protect your skin, or a wheat-bag that you heat up in a microwave. Or you could just put your hands or feet in a bowl of warm water for a few minutes whenever you get the chance.

If your joints are swollen you may find an ice pack, again wrapped in a towel to protect your skin, helps to reduce swelling and discomfort. Ice can be applied for up to 20 minutes every couple of hours.

### **Splints and other supports**

There's a range of different splints, braces and supports available for painful joints. These can be particularly helpful if osteoarthritis has affected the alignment of a joint. It's best to seek professional advice from an occupational therapist or physiotherapist before choosing one, so you can be sure it's suitable for your needs.

It's not usually recommended that you wear a splint or support all the time, as this could lead to weakening of the muscles. Your therapist will suggest some gentle exercises to do when you remove your splint or support to help keep your joints mobile.

## Footwear

Choosing comfortable, supportive shoes can make a difference not only to your feet, but also to other weight-bearing joints including the knees, hips and spinal joints. In general, the ideal shoe would have a thick but soft sole, soft uppers, and plenty of room at the toes and the ball of the foot.

If you have particular problems with your feet, then it's worth seeing a podiatrist for advice. For some foot problems, your doctor or podiatrist may recommend an insole that helps to partly shift the load to parts of the foot that aren't affected by osteoarthritis.

## Walking aids

Some people find a walking stick helpful. If your leg sometimes 'gives way' then a stick may help you feel less afraid of falling. When held in the opposite hand, it can also help to reduce pressure on a painful knee or hip. It's best to get advice from a healthcare professional, as your reason for using a stick will determine which side you should use it on.

It's important that a walking stick is adjusted correctly for your height – a good supplier should do this for you. If you have arthritis in your hands, check that the handle feels comfortable.

## Posture

Your posture, among other factors, can affect the alignment of your joints. This, in turn, can mean that your joints, or parts of your joints, are under more strain than usual as you move. If you have arthritis, you'll find that developing and maintaining good posture can really help to put less strain on your joints. When your posture is good, your body will feel more relaxed.

Think about your posture throughout the day. Check yourself while walking, at work, while driving, or while sitting watching television. If you can increase your body awareness during daily activities, your good posture will quickly become a habit.

**“I'm often tempted to do as much as I can when I'm having a good day. But I find it's better in the long run to pace myself.”**

## Pacing yourself

If your pain varies from day to day, it can be tempting to take on too much on your good days, which can lead to more pain afterwards.

Learn to pace yourself. If there are jobs that often increase your pain, try to break them down into smaller chunks, allow time for rest breaks, and alternate with jobs that you find easier. Or think about other ways of doing a job that would cause less pain.

An occupational therapist will be able to offer advice on pacing yourself and on reducing the strain on your joints – whether the jobs you find difficult are at work, at home or in your leisure interests. You can ask your GP to refer you for occupational therapy or you can find an occupational therapist who works privately on the Royal College of Occupational Therapy website.



**Find out more about managing pain at:**  
[www.versusarthritis.org/about-arthritis/managing-symptoms/managing-your-pain](http://www.versusarthritis.org/about-arthritis/managing-symptoms/managing-your-pain)

## Surgery

Most people with osteoarthritis won't need surgery. But if your arthritis is very bad and your symptoms are having a big impact on your quality of life, then your doctor may discuss surgery with you. This is usually only considered once you've tried all other suitable treatments.

Many thousands of hip and knee replacements are carried out each year for osteoarthritis, and other joint replacements are also becoming more common. But there are other surgical options besides joint replacement.

Sometimes keyhole surgery techniques may be used to wash out loose fragments of bone and other tissue from your knee – this is called arthroscopic (arth-row-scop-ic) lavage. This isn't generally available on the NHS for straightforward osteoarthritis. However, it may be offered if you're treated privately.

For some smaller joints, fusion can be very successful. This means that the bones in a joint are fixed together surgically – this prevents movement of the joint, and therefore pain. Although the loss of movement may seem strange at first, fusion often gives good results.

If you're thinking about having surgery, take some time to find out what you can expect from it, what the possible risks are, and how you can best prepare for your operation and plan ahead for your recovery. Your surgical team will talk you through everything but don't hesitate to ask if you're unsure about any aspect of the planned surgery.

## Supplements and complementary treatments

### Taking supplements

People with arthritis often try a range of supplements including herbal remedies, vitamins, minerals and dietary supplements.

In many cases, there's little research evidence to show that they improve arthritis or its symptoms, but many people feel they do benefit from them.

Before you start taking supplements:

- Do some research on the supplement(s) you plan to take.
- Bear in mind that everyone's different – even if somebody you know and trust has found something helpful, it doesn't mean it will work for everyone.
- Check with your doctor or pharmacist that it is safe to take with your prescribed or over-the-counter drugs.
- Find out whether there are any possible side effects with the supplement or medicine you're thinking of trying. If you do develop any new symptoms, see your doctor.
- Keep a diary of how you feel; it will then be easier to tell if the supplement(s) are having an effect.
- Buy from reputable manufacturers.
- Think about the cost – taking supplements can be expensive in the long term.

Below are a few of the supplements often used by people with osteoarthritis.

### Glucosamine

Glucosamine (glue-cos-a-mean) is found naturally in the body in structures such as ligaments, tendons and cartilage. Supplements are usually produced from crab, lobster or prawn shells, although



shellfish-free types are available. There's some research to suggest it may have some benefit in painful osteoarthritis, especially of the knee.

Most trials have used a dose of 500mg three times a day, and the evidence seems to suggest glucosamine sulphate may be more effective than glucosamine hydrochloride. It doesn't help the pain straight away – you'll need to take it for a couple of months before you can judge whether it's helped. If it hasn't helped after two months, then it's unlikely that it will.

### **Chondroitin**

Chondroitin (con-droy-tin) exists naturally in our bodies and it's thought that it helps give cartilage elasticity. The research evidence is limited to animal studies that suggest it might help to slow the breakdown of cartilage.

You shouldn't expect to see any improvement for at least two months. If your cartilage is badly damaged, it's unlikely that you'll get any benefit from chondroitin.

### **Fish oils**

Fish oils and fish liver oils are widely believed to be good for the joints. In fact, there's not enough data available to say whether these are effective for osteoarthritis, although there is good evidence that fish oils can help to improve symptoms of rheumatoid arthritis.

It's important not to take large doses of supplements made from fish livers as they often contain a lot of vitamin A, which can be harmful if you take more than the recommended daily amount. Supplements made from the whole fish usually contain less vitamin A, so are safer if you find you need a high dose of fish oils to get any benefit from them.

## Complementary treatments

There are a number of different treatments available, such as acupuncture and the Alexander technique, and they can generally be used alongside prescribed or over-the-counter medicines.

Complementary treatments can help ease some of the symptoms of arthritis, such as pain and stiffness, as well as helping to manage some of the unwanted effects of taking medication. Some therapies, such as relaxation techniques, can improve your general wellbeing.

Some of the most popular therapies are listed here:

- Acupuncture claims to restore the natural balance of health by inserting fine needles into specific acupoints in the body to correct imbalances in the flow of energy. There's evidence that acupuncture is effective in easing some of the symptoms of osteoarthritis. However, the treatment isn't currently recommended by NICE for the treatment of osteoarthritis.
- The Alexander technique teaches you to be more aware of your posture and to move with less physical effort. There's evidence that it can be effective for low back pain, though not specifically for osteoarthritis.
- Aromatherapy uses oils obtained from plants to promote health and wellbeing. The oils can be vaporised, inhaled, used in baths or a burner, or as part of an aromatherapy massage. There's no research evidence that aromatherapy is effective for the symptoms of osteoarthritis, but some people may find there are benefits such as aiding relaxation.
- Massage can loosen stiff muscles, ease tension, improve muscle tone, and increase the flow of blood. A good massage can leave you feeling relaxed and cared for, though there's only a little evidence that it's effective in treating the symptoms of osteoarthritis.

- Osteopathy (os-tee-o-path-ee) and chiropractic (ky-ro-prac-tic) involve manually adjusting the alignment of the body and applying pressure to the soft tissues of the body. The aim is to correct structural and mechanical faults, improve mobility, relieve pain and allow the body to heal itself. There's a little research evidence for the effectiveness of chiropractic for spinal osteoarthritis but not for other types of osteoarthritis. There's no specific research evidence available on whether osteopathy is effective for osteoarthritis.
- T'ai chi (tie-chee) is a non-combat martial art and 'mind-body' exercise designed to calm the mind and promote self-healing through sequences of slow, graceful movements. There's good evidence that t'ai chi may ease osteoarthritis symptoms, particularly in the knee.

## Finding a good therapist

Some therapies are available on the NHS, so it's worth asking your GP about this. Private health insurance companies may also cover some types of therapy. However, most people pay for their own treatment, which can be costly, so it's worth doing some research.

Some therapies make bold claims – if you have any doubts, ask what evidence there is to back up these claims. Ask other people with osteoarthritis if they can recommend a therapist, but remember that what works for someone else may not suit you. The Complementary and Natural Healthcare Council can also help you find a qualified therapist.

Before you make any commitment:

- Ask how much treatment will cost, and how many sessions you'll need before you start to feel the benefit.
- Ask if the therapist is a member of a professional body, what kind of training they've had and what experience they have of treating people with osteoarthritis.

- Ask if they have insurance, just in case something goes wrong.
- Make sure they take a full medical history from you.

Tell your therapist about any drugs you're taking and speak to your doctor about the therapy you're thinking of trying. Don't stop taking prescribed drugs without talking to your doctor first and be cautious if any practitioner advises you to do so.

**“Thanks to the small changes I’ve made, I feel I’m back in control.”**



## Practical matters

### Managing at home

Depending on which joints are causing you problems, there are lots of aids and adaptations to help you around the home, and some fairly simple changes can make a big difference.

In the kitchen, for instance:

- Rearrange cupboards and drawers so the things you use the most are nearby.
- Switch to lightweight pans, mugs or kettle.
- Look for equipment with easy-to-use buttons and switches.
- Change from a manual to an electric tin opener, or use a cap gripper. Choose knives and peelers with padded handles.
- Have a stool in the kitchen so you can sit while you're preparing food, or a trolley for moving heavy items across the room.
- Have twist-top taps changed for the easy-to-use lever type.



See Versus Arthritis booklet 'Everyday Living with Arthritis' or go to: [www.versusarthritis.org/about-arthritis/living-with-arthritis/your-home](http://www.versusarthritis.org/about-arthritis/living-with-arthritis/your-home)

If you're not sure what's available or how you might be able to reduce the strain on your joints, an occupational therapist will be able to advise you. Your doctor can refer you to an occupational therapist.

You may be able to get help with the costs of obtaining aids or having adaptations to your home. Eligibility varies depending on whether you live in England, Wales, Scotland or Northern Ireland. Wherever you live, the first step is to ask your local authority for a needs assessment.

### In work or education

Most people with arthritis are able to continue in their jobs, although you may need to make some changes to your working environments, especially if you have a physically demanding job. Struggling on if you're having difficulties could make your arthritis worse.

Smarter ways of working will help protect your joints and conserve energy, including:

- organising your work – rearranging your work area, using computer equipment correctly, taking regular breaks, relaxing, pacing yourself and varying tasks
- flexibility – perhaps working a shorter day or different hours or being based at home some of the time if that fits in with your job.

Speak to your employer's occupational health service if they have one, or your local Jobcentre Plus can put you in touch with Disability Employment Advisors who can arrange work assessments. They can advise you on changing the way you work and on equipment that may help you to do your job more easily. If necessary, they can also help with retraining for more suitable work.

Contact your local JobCentre Plus for information about Access to Work, which is a government initiative to help people overcome barriers to starting or keeping a job.

If you're going into higher education, you may be eligible for a Disabled Students' Allowance. The allowance covers any extra costs or expenses students have because of a disability. For more information, visit the Disability Rights UK website.



Work and arthritis:  
[www.versusarthritis.org/about-arthritis/living-with-arthritis/work](http://www.versusarthritis.org/about-arthritis/living-with-arthritis/work)

## Public transport

Most public transport is covered by UK and European accessibility legislation. However, there are still a lot of improvements to be made.

Information is available on the National Rail website about station accessibility, train and station facilities, and assistance options. Transport for London offers similar information on their website and has produced a guide to avoiding stairs on the London Tube network.

Other local authorities and transport providers produce similar guides to accessible bus, train and minicab services, and some run their own transport schemes.



## Caring for yourself

The emotional effects of arthritis can have just as much of an impact as the physical symptoms. Severe or long-term pain that affects your daily life and possibly disturbs your sleep can affect your mood. From time to time, your arthritis may get on top of you.

But help is available if you feel osteoarthritis is starting to get you down. If you're feeling low, talk to your GP, who can signpost you to the appropriate services. You can also call our helpline on 0800 5200 520, who will listen and offer emotional support.

### Tips for living well with osteoarthritis

Being open with your healthcare team about the problems you're having means they'll be able to help you better or point you in the direction of the most suitable services.

- Find out as much as you can about your arthritis. Being well informed can make you feel less worried about the future.
- Accept your limitations. Think about what you can do and enjoy, rather than the things you can't do.
- Try to keep up your social life. If you need to make adjustments, talk to your family and friends about why you need to do things differently.
- Include regular exercise in your day-to-day life. It will build your strength, help you to keep flexible and boost your mood.
- Talk to somebody who understands how you're feeling. This could be someone close to you or someone else with arthritis. Sharing your experiences with others in the same position as you provides valuable mutual support.

Relationships may come under a bit of strain. If you have a partner, talk to them openly and honestly about how you feel, both physically and emotionally, and encourage them to ask questions.

## Research and new developments for osteoarthritis

Research is helping us to understand more about the causes of osteoarthritis, and to develop new treatments.

Our previous research has:

- highlighted the important role that exercise can play in reducing pain in people with osteoarthritis
- contributed to the approval for NHS funding of a treatment called autologous (or-tol-o-gus) chondrocyte (kon-dro-site) implantation (ACI) that repairs small areas of damaged cartilage using healthy cartilage grown from a patient's own cells
- identified a number of jobs linked with a higher risk of developing osteoarthritis.

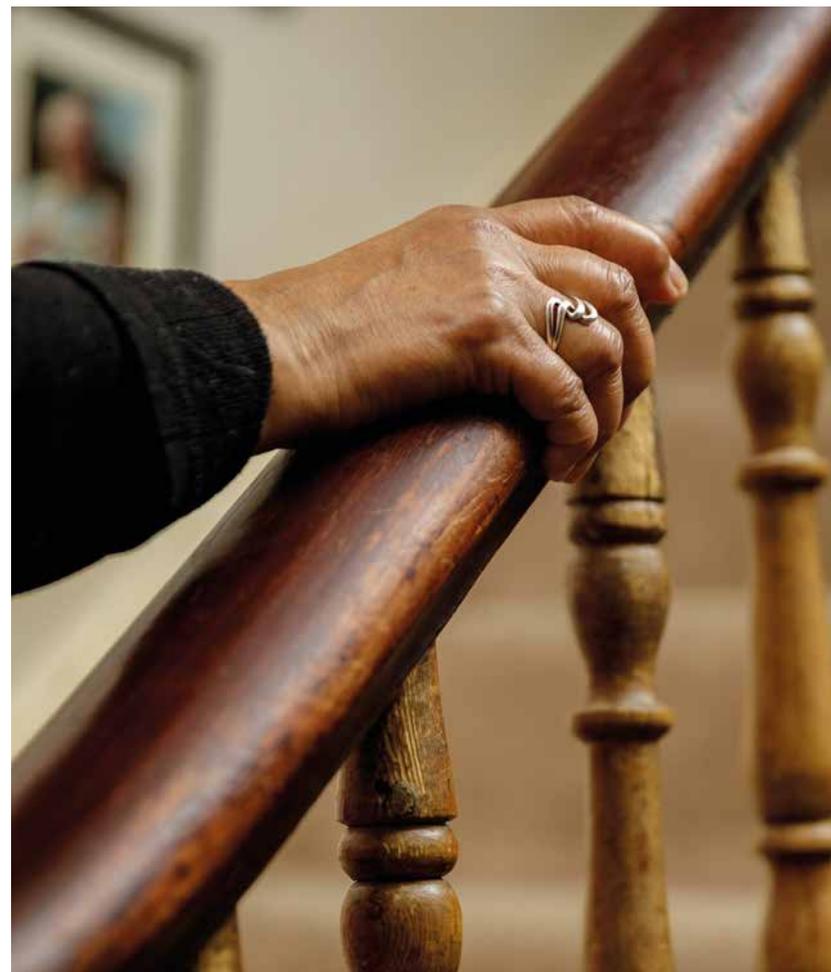
Research we're currently funding includes:

- a centre based in Oxford, which is looking at how osteoarthritis develops and aims to find new ways of predicting how it's likely to progress
- a pain centre, based in Nottingham, which aims to improve our understanding of what causes pain so that better treatments can be developed
- early trials of stem cell treatments, which could help to repair cartilage damaged by osteoarthritis
- a study into the part played by nerve proteins in and around the joints to find out if they could be a target for future pain treatments.

## Glossary

**Gout** is the most common type of inflammatory arthritis. It's caused when substances that are normally removed from the body by the kidneys build up in the joints. This can then cause severe pain and inflammation.

**Rheumatoid arthritis** is a long-term condition that can cause pain, swelling and stiffness in your joints.



## Exercises for osteoarthritis

It's important to stay active when you have osteoarthritis. Exercising will help to ease stiffness and strengthen the muscles that help to support your joints.

As well as the simple exercises shown here, you should choose a form of exercise you enjoy and stick at it. Swimming, walking, yoga and Pilates are all great options.

### Straight-leg raise (sitting)



Sit well back in a chair, with your back straight, shoulders back and head level.

Straighten and raise one leg. Hold for a slow count to 10, then slowly lower your leg. Repeat this at least 10 times for each leg.

As the exercise becomes easier, try it with light ankle weights and pull your toes towards you, so you feel a stretch at the back of your lower leg.

### Straight-leg raise (lying)

You can do this on the floor or lying in bed. Bend one leg at the knee. Hold your other leg straight and lift your foot just off the floor or bed. Hold for a slow count of five, then lower. Repeat five times with each leg every morning and evening.



### Hip extension

Hold onto a chair or work surface for support. Move your leg backwards, keeping your knee straight. Clench your buttock tightly and hold for five seconds. Don't lean forwards. Repeat with the other leg.



### Hip abduction



Stand with one hand resting on the back of a chair or work surface for support.

Lift your leg straight up to the side. Hold for five seconds and then slowly lower your leg. Try to keep your body straight throughout. Repeat five times on each side.

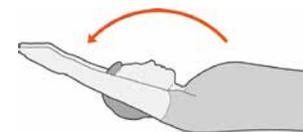
### Arm stretch (standing)

Stand with your arms relaxed at your sides. Raise your arms as far as you can and hold for 5–10 seconds. Lower and repeat five times.

You can do this exercise by raising your arms either in front of you or to the side. Doing some of each will stretch more muscles.



### Arm stretch (lying)



Lie on your back with your arms by your sides. Raise your arms overhead as far as you can and hold for 5–10 seconds. Return your arms to your sides and repeat five times.

### Arm lifts

Place your hands behind your head so your elbows are pointing to the sides and pressed back as far as you can. Hold for five seconds.

Then place your hands behind your back, again keeping your elbows pointing out and pressed back as far as you can. Hold for five seconds. Do five sets.



## Useful addresses

### **Chartered Society of Physiotherapy**

The professional, educational and trade union body for UK physiotherapists can help you to find a physiotherapist near you.

[www.csp.org.uk/public-patient](http://www.csp.org.uk/public-patient)

### **Complementary & Natural Healthcare Council**

An independent body set up by the government to protect the public by providing a UK register of complementary health practitioners.

Tel: 020 3668 0406

[www.cnhc.org.uk](http://www.cnhc.org.uk)

### **Disabled Living Foundation**

A national charity providing impartial advice, information and training on independent living.

Phone: 020 7289 6111

Helpline: 0300 999 0004

[www.dlf.org.uk](http://www.dlf.org.uk)

### **Disability benefits**

For information on benefits you may be entitled to go to:

[www.gov.uk/disability-benefits-helpline](http://www.gov.uk/disability-benefits-helpline)

or [www.nidirect.gov.uk/information-and-services/benefits-and-financial-support/disability](http://www.nidirect.gov.uk/information-and-services/benefits-and-financial-support/disability) in Northern Ireland.

### **Disability Information and Advice Line (DIAL)**

An independent network of local disability information and advice services run by and for disabled people.

[www.dialuk.info/contact-us](http://www.dialuk.info/contact-us)

### **Disability Rights UK**

An organisation providing advice on independent living, continuing education, training, and employment.

Tel: 0330 995 0400

[www.disabilityrightsuk.org](http://www.disabilityrightsuk.org)

### **Driving Mobility**

A network of organisations across the UK offering advice to people who have a condition that might affect their mobility.

Tel: 0800 559 3636

[www.drivingmobility.org.uk](http://www.drivingmobility.org.uk)

### **General Chiropractic Council**

An independent body set up by parliament to regulate the chiropractic profession.

Phone: 020 7713 5155

[www.gcc-uk.org](http://www.gcc-uk.org)

### **General Osteopathic Council**

An independent body set up to regulate the practice of osteopathy in the UK.

Phone: 020 7357 6655

[www.osteopathy.org.uk](http://www.osteopathy.org.uk)

### **Motability**

A scheme that allows disabled people to get mobile by exchanging their mobility allowance to lease a new car, scooter or powered wheelchair.

Tel: 0300 456 4566

[www.motability.co.uk](http://www.motability.co.uk)

### **Research Institute for Disabled Consumers (RiDC)**

A national charity conducting research and producing consumer guides on products and services for disabled people.

Tel: 020 7427 2460

[www.ridc.org.uk](http://www.ridc.org.uk)

### **Royal College of Occupational Therapists**

The professional body for occupational therapists in the UK can help you find an occupational therapist in your area.

[www.rcotss-ip.org.uk/find](http://www.rcotss-ip.org.uk/find)

## Where can I find out more?

If you've found this information useful, you might be interested in other titles from our range.

You can download all of our booklets from our website [www.versusarthritis.org](http://www.versusarthritis.org) or order them by contacting our Helpline. If you wish to order by post, our address can be found on the back of this booklet.

Helpline: 0800 5200 520  
Email: [helpline@versusarthritis.org](mailto:helpline@versusarthritis.org)

### **Bulk orders**

For bulk orders, please contact our warehouse directly to place an order:

**APS**  
Phone: 0800 515 209  
Email: [info@versusarthritis.org](mailto:info@versusarthritis.org)

## Tell us what you think

All of our information is created with you in mind. And we want to know if we are getting it right. If you have any thoughts or suggestions on how we could improve our information, we would love to hear from you. Please send your views to [bookletfeedback@versusarthritis.org](mailto:bookletfeedback@versusarthritis.org) or write to us at:

Versus Arthritis, Copeman House, St Mary's Court, St Mary's Gate, Chesterfield, Derbyshire S41 7TD.

## Thank you!

A team of people helped us create this booklet. We would like to thank Mike Doherty for writing the original text and Dr Natasha Usher and Dr Kevan Thorley for helping us with reviewing the booklet.

We would also like to give a special thank you to the people who shared their stories, opinions and thoughts on the booklet. Your contributions make sure the information we provide is relevant and suitable for everyone.

## Talk to us

### Helpline

You don't need to face arthritis alone. Our advisors aim to bring all of the information and advice about arthritis into one place to provide tailored support for you.

Call 0800 5200 520 for free today or email us at [helpline@versusarthritis.org](mailto:helpline@versusarthritis.org)

### Our offices

We have offices in each country of the UK. Please get in touch to find out what services and support we offer in your area:

#### **England**

Tel: 0300 790 0400  
Email: [enquiries@versusarthritis.org](mailto:enquiries@versusarthritis.org)

#### **Scotland**

Tel: 0141 954 7776  
Email: [scotland@versusarthritis.org](mailto:scotland@versusarthritis.org)

#### **Northern Ireland**

Tel: 028 9078 2940  
Email: [nireland@versusarthritis.org](mailto:nireland@versusarthritis.org)

#### **Wales**

Tel: 0800 756 3970  
Email: [cymru@versusarthritis.org](mailto:cymru@versusarthritis.org)

## Osteoarthritis

Osteoarthritis is by far the most common form of joint disease. In this booklet we explain what osteoarthritis is, how it develops and how it's treated. We also give some hints and tips on managing your arthritis in daily life.

**FAMILIES**  
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calls charged at standard rate

[www.versusarthritis.org](http://www.versusarthritis.org)  
[enquiries@versusarthritis.org](mailto:enquiries@versusarthritis.org)

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