Arthritis Research UK

Condition
**Feet, footwear and arthritis**

# Feet, footwear and arthritis

**This booklet provides information and answers to your questions about foot conditions and footwear.**

# What should you know about feet, footwear and arthritis?

The foot is a complex and hard-working structure that can quite often be affected by arthritis and related problems. In this booklet we'll explain the causes of foot pain, what treatments are available and how you can best look after your feet. We'll also explain what you should look for when choosing shoes and suggest where you can get more help and advice.

At the back of this booklet you'll find a brief glossary of medical words - we've underlined these when they're first used in the booklet.

**www.arthritisresearchuk.org**

# What's inside?



# At a glance
# Feet, footwear and arthritis

The foot has a very complex structure and most people take a million or so steps a year, so it's not surprising that the feet can be prone to arthritis and related problems.

## What typical foot problems are there?

Different areas of the feet can be affected by different conditions:

**Ankles and heels**
- valgus heel
- plantar fasciitis.

**Arches**
- changes in the structure
- strain in muscles or tendons.

**Ball of the foot**
- corns and calluses
- bursae
- neuroma
- rheumatoid nodules.

**Toes**
- bunions
- hammer toes.

## What causes foot pain?

The two main causes of arthritis-related foot pain are:

- osteoarthritis – often affects the big toe or the arch and less frequently the ankle
- inflammatory arthritis – different types affect different parts of the foot.

## What treatments are there?

Most people will be able to care for their foot pain themselves. Finding comfortable footwear can help with most problems, and losing weight will often help reduce symptoms, but more specific treatments include:

- non-steroidal anti-inflammatory drugs (NSAIDs) in tablet or gel form
- special insoles
- steroid injections
- surgery.

## How should I look after my feet?

A regular footcare routine can help to keep problems to a minimum but seek advice from your doctor or a podiatrist first, especially if you have conditions such as vasculitis or scleroderma, you're taking steroids or your skin tends to be slow to heal.

**Most people will take a million or so steps a year.**

## What footwear should I choose?

Comfort should be the main consideration when choosing footwear. Soft uppers (the part of the shoe that covers the toes, tops and sides of the feet, and the back of the heel) and a flexible sole are usually best. An adjustable fastening will improve fit generally and help if the feet swell. Remember that your feet change shape as you get older so don't automatically buy the same size you've always worn.

## Who can help?

A Healthcare Professionals Council (HPC) registered podiatrist will be able to help with general footcare problems, while an orthotist will be able to advise on special insoles and custom-made or adapted shoes.

**Your foot has a complex structure consisting of 26 bones and more than 30 small joints.**

## How is the foot structured?

Figure 1 shows a picture of the feet. They have a complex structure consisting of 26 bones, more than 30 small joints (where bones meet) and many muscles, tendons, ligaments and nerves that all work together. Problems in the feet and ankles are often, but not always, associated with arthritis.

Most feet have an arch shape that spreads the weight of the body evenly over many bones and joints. Feet with lower arches tend to be more flexible, while feet with higher arches are generally less flexible (see Figure 2). High or low arches aren't necessarily a problem but they can increase your chances of developing other foot problems.

The structure of the foot changes as we get older or if arthritis affects the foot joints, and many people will notice changes, particularly in the arch of the foot.

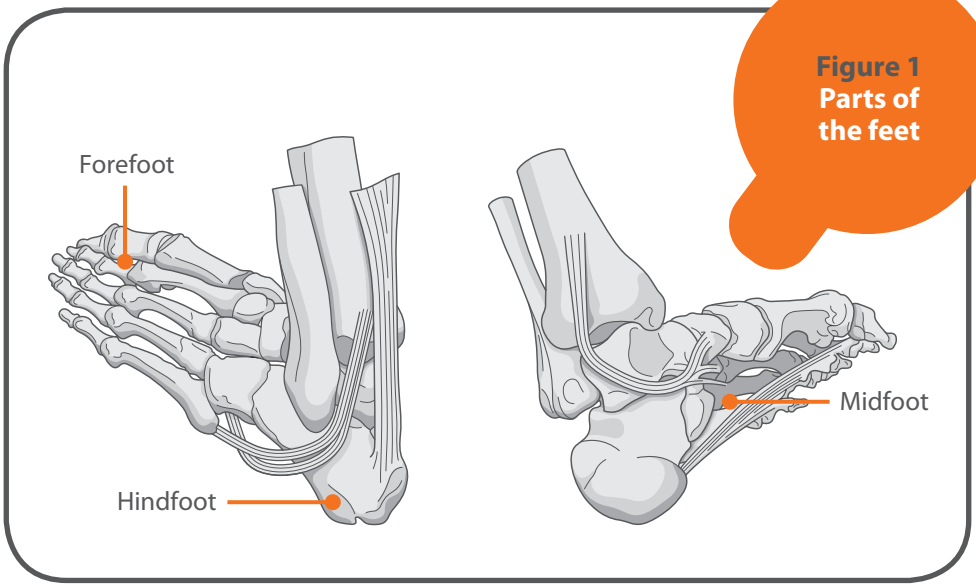



**Figure 1 Parts of the feet**

## What causes foot pain?

The feet and ankles can be affected by several types of arthritis, including osteoarthritis and inflammatory arthritis.

### Osteoarthritis

Osteoarthritis can affect any of the joints in the feet. As people get older, osteoarthritis can be linked to changes in the shape of feet, which may cause pain.

Osteoarthritis often affects the big toe joint. The joint will become stiffer and the range of movement will be reduced. Often the bones become more knobbly due to the formation of osteophytes (an overgrowth of new bone). These changes may accompany a bunion (a lump on the side of the big toe joint).

Osteoarthritis is quite common in the arch area but can also develop in the ankle, usually following a previous injury or damage to the joint from long-standing inflammatory arthritis. Osteoarthritis in the feet often accompanies osteoarthritis in other joints, such as the hips or the knees, and can add to difficulties with walking.

**See Arthritis Research UK booklet** *Osteoarthritis*.

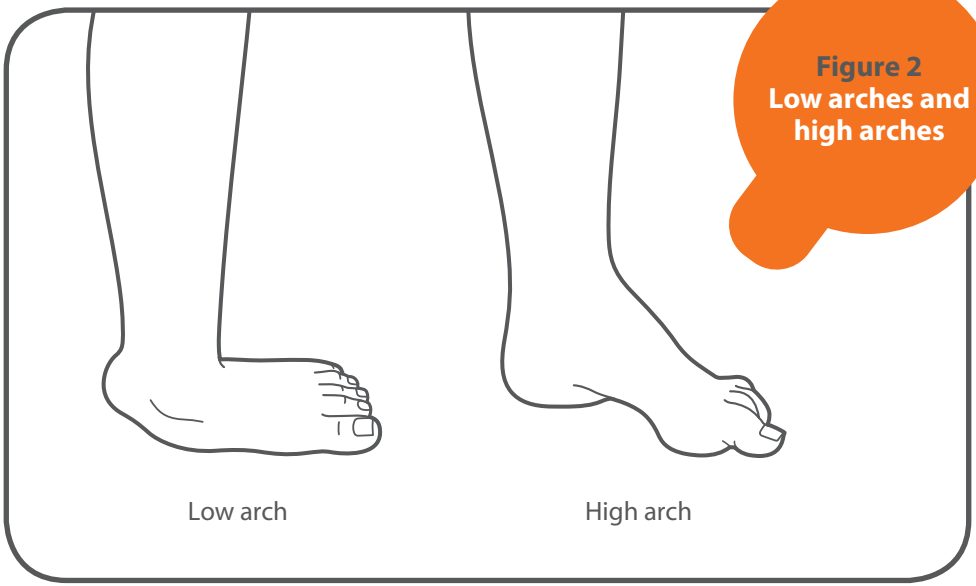



**Figure 2**
**Low arches and high arches**

## Inflammatory arthritis

There are several different forms of inflammatory arthritis and the effect on your feet depends on which type of arthritis you have.

| | |
|---|---|
| **Rheumatoid arthritis** | affects many joints in the foot. |
| **Reactive arthritis** | usually affects the ankle or around the heel.<br>may affect the toes, causing swelling (dactylitis). |
| **Psoriatic arthritis** | often causes swelling of a toe (dactylitis). |
| **Gout** | most commonly affects the big toe joint. |
| **Ankylosing spondylitis** | mainly affects the spine but may also affect the heels. |

Apart from problems in the joints themselves, people with inflammatory arthritis may have inflammation and discomfort in the tendons and the other soft tissues in the feet. The part under or behind the heel where the tendons attach to the heel bone (the Achilles tendon) is quite often affected in this way. Dactylitis causes pain and swelling, usually in just one or two of the toes (this is also known as sausage toe). It's commonly associated with psoriatic and reactive arthritis.

Gout is a particular type of arthritis caused by the formation of crystals in a joint. It often occurs in the foot, and the big toe is the most commonly affected joint. Gout causes severe inflammation and the joint will be red, hot and swollen during an attack, which typically lasts 1–2 weeks. Without treatment, repeated attacks can cause permanent damage to the joint, leading to osteoarthritis. However, gout can usually be well controlled with medications.

**See Arthritis Research UK booklets**
*Ankylosing spondylitis; Gout; Psoriatic arthritis; Reactive arthritis; Rheumatoid arthritis.*

## What other kinds of foot problems are there?

Different parts of the feet can be affected by different types of arthritis, which cause specific problems.

### Problems in the ankles and heels

Pain in the ankles and heels can come from either the joints themselves or from the muscles and tendons around the joint. Osteoarthritis isn't very common in the ankle but can be the result of previous damage from an injury or inflammatory arthritis. When inflammatory arthritis affects the ankle, the joint may be especially sore or stiff first thing in the morning or after sitting for a while.

### Valgus heel

It's fairly common in people with rheumatoid arthritis for the heel to drift outwards. This is known as valgus heel (see Figure 3). It may not cause any problems if it doesn't drift too far, but it can be troublesome if the arch flattens as a result. Research has shown that early treatment of rheumatoid arthritis may slow the development of valgus heel.

### Plantar fasciitis

Plantar fasciitis is inflammation at the site where fascia attach under the heel bone (plantar fasciitis or enthesopathy). It used to be known as policeman's heel and is the most common cause of discomfort in this area. Plantar fasciitis frequently affects people with inflammatory arthritis but it can also occur in people without arthritis.

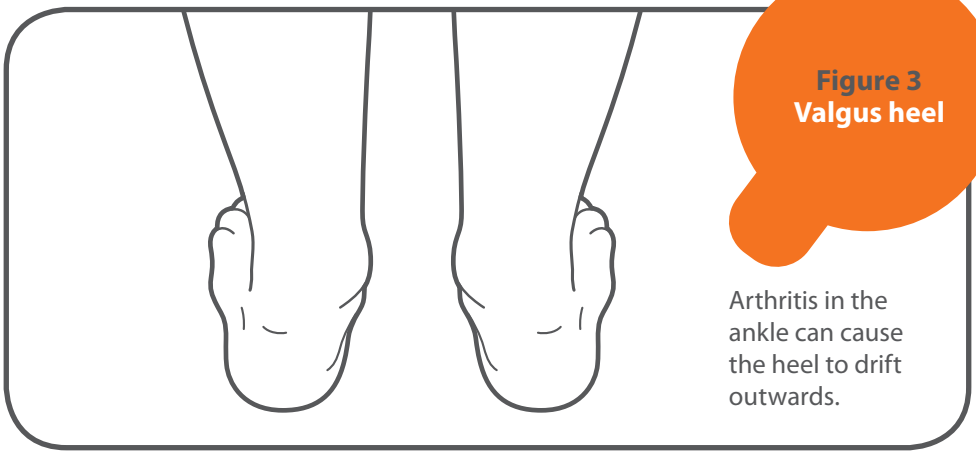


**Figure 3**
**Valgus heel**

Arthritis in the ankle can cause the heel to drift outwards.

**The arches of the feet allow the weight of the body to be spread over many bones and joints. Having high or low arches can increase your chances of developing foot problems.**

**The arch structure can change when it's affected by arthritis.**

Research has shown that plantar fasciitis is sometimes caused by the shortening of the Achilles tendon and that exercise to lengthen it may help. Losing weight and wearing insoles to provide extra cushioning in your shoes may ease symptoms in the heel. A steroid injection can sometimes help but it's recommended that you try other treatments first.

### Achilles tendinitis

Achilles tendinitis is an inflammation of the Achilles tendon at the back of the ankle. It's quite common in people who have psoriatic or reactive arthritis or ankylosing spondylitis. It can also occur as an over-use injury in people who take part in excessive exercise or exercise that they're not used to.

## Arch pain and tiredness

The arches of the feet allow the weight of the body to be spread over many bones and joints. The arch structure can change when it's affected by arthritis, and the structures nearby can be strained. In mild cases this feels like tiredness in the arch area, but it can become more painful if the muscles or tendons are very overworked.

! Losing weight if you're overweight can help ease your symptoms because it reduces the stress on your joints. Swimming is a good form of exercise if you find weight-bearing exercise difficult.

Some people find arch supports or orthoses helpful for arch pain or tiredness. Non-steroidal anti-inflammatory drugs (NSAIDs) can help with arch pain, and a local steroid injection may ease more severe pain. Sometimes you may find an anti-inflammatory gel applied two to three times per day can help treat individual joints. You can buy this in chemists and supermarkets. Oral medication should be taken when a number of joints are painful.

Having higher arches (pes cavus) may increase your chances of developing other problems such as hammer toes, bunions, corns or calluses. Lower arches (pes planus) are sometimes linked to leg problems, especially knee pain.

## Pain in the ball of the foot

Pain can be caused by arthritis in the joints at the ball of the foot, especially if you have arthritis elsewhere in your body. However, most pain here comes from minor damage to the soft tissues – the tendons, bursae, fat pads, nerves and skin.

The most common causes of discomfort under the ball of the foot are calluses (a build-up of hard skin) and corns. Calluses form at areas of high pressure or friction and typically cause a burning pain. If pressures are extremely high, small areas of skin within the callused area produce an abnormal type of skin tissue, leading to the formation of a corn. You can ease discomfort by scraping away the excess skin with a pumice stone or an abrasive board, **not** with an open blade.

You shouldn't do this yourself without advice from an HPC-registered podiatrist – if the tissue is weak or if your skin takes longer to heal, for example if you have diabetes, you may do more harm than good.

**!** Remember that the callus will grow back in 4–6 weeks unless the pressure or friction that caused it is removed by changing to softer or roomier footwear or by inserting cushioning pads.

Other problems that can occur in the ball of the foot include bursae, neuromas and rheumatoid nodules.

## Bursae

People with rheumatoid arthritis often develop bursae (fluid-filled sacs) under the ball of the foot (see Figure 4). Bursae can grow and shrink as the level of inflammation varies. They occur next to large bunions or other irritated joints. Treatment for an inflamed bursa starts with reducing the pressure on the area, although if it's large, especially inflamed or you've had it for a long time it may help to have fluid drained and a steroid injection.

## Neuroma

A neuroma is a thickening of a nerve, which occurs when it rubs against other internal tissues. It's most common at the base of the toes, often between the third and fourth toes. The symptoms are pain or tingling in the toes.

A neuroma should settle down with more roomy footwear, but special insoles or pads under the area may help. These may be available through an HPC-registered podiatrist. Sometimes a local steroid injection is recommended and, if symptoms are severe, the thickened nerve may be surgically removed. An orthopaedic surgeon will be able to advise you about this.

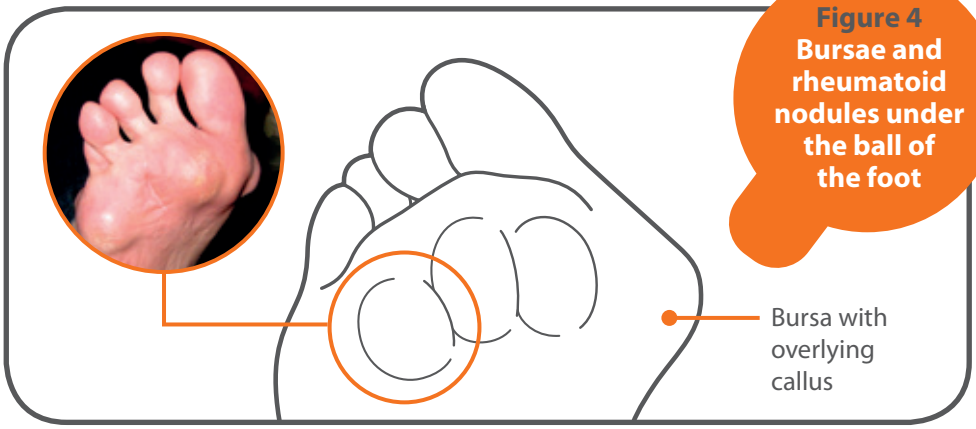



**Figure 4 Bursae and rheumatoid nodules under the ball of the foot**

**Sometimes, as a bunion develops, the big toe may be pushed over towards the smaller toes.**

### Rheumatoid nodules

In rheumatoid arthritis, firm, pea-sized lumps can occur at pressure points such as the big toe joints, the back of the heels or on the toes. Nodules on the soles of the feet can be particularly uncomfortable. Padding can ease the discomfort but, in some cases, the nodules may need to be removed surgically.

## Problems in the toes

### Bunions

Bunions are bony lumps that develop on the side of the foot at the base of the big toe (see Figure 5). The big toe joint becomes stiff and its range of movement is reduced. This is called hallux rigidus. A bursa may develop here too, especially if shoes press against the bunion. The bursa may become inflamed and painful.

Sometimes, as the bunion develops, the big toe may be pushed over towards the smaller toes. This condition is known as hallux valgus. This can cause the other toes to become clawed or permanently bent (known as hammer toes). This is quite common in rheumatoid arthritis.

Symptoms of a bunion can be controlled by choosing shoes with a soft, wide upper to reduce pressure and rubbing on the joint. Bunion pads are available

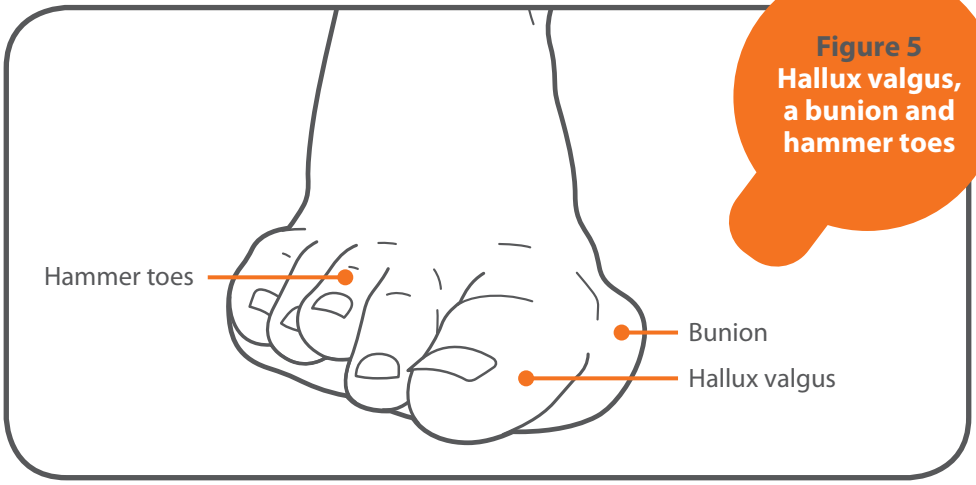



**Figure 5 Hallux valgus, a bunion and hammer toes**

from chemists if you have a flare-up of a bunion or bursa, but these should only be used on the advice of an HPC-registered podiatrist. If symptoms persist over a long period, the bunion may need to be surgically removed. Again, an orthopaedic surgeon can advise on this. Because we now have more sophisticated methods, the outcomes of surgery have improved a lot in the last 10 years or so.

## Hammer toes

Hammer toes (also known as claw toes, mallet toes or retracted toes) are toes that are permanently bent (see Figure 5). Hammer toes happen either because of problems with the tendons inside the foot or because the toes are squashed by poorly fitting shoes and/or socks.

Hammer toes are most common in people who have bunions or high-arched feet. Discomfort from hammer toes is usually due to a build-up of hard skin over the raised joints, resulting in corns and calluses. There's also a risk of ulceration, but this isn't common.

Mild cases may be helped by rubber, leather or silicone splints. Pain from corns and calluses may be eased by choosing shoes with a more generous fit or softer uppers, or by using a protective pad over the painful area. The only way to correct hammer toes is with surgery.

## Ulcers

Ulcers on the toes and feet can be problematic in people with scleroderma where the circulation is compromised due to Raynaud's phenomenon. Speak to your specialist team, which may include a nurse specialist and an HPC-registered podiatrist, if you develop an ulcer because it's important to treat it as soon as possible. If these ulcers can become infected they may also require treatment with antibiotics. Medications to improve the blood flow can help.

**See Arthritis Research UK booklets** *Raynaud's phenomenon; Scleroderma.*

## What treatments are there for foot pain?

Most foot problems will be helped by finding footwear that has more room and is more comfortable, and by losing weight if you're overweight. However, a number of specific treatments can also help:

**Non-steroidal anti-inflammatory drugs (NSAIDs)** can help to relieve painful inflammation, for example in the arch or heel area. Like all drugs, NSAIDs can sometimes have side-effects, but your doctor will take precautions to reduce the risk – for example, by prescribing the lowest effective dose for the shortest possible period of time.

NSAIDs can cause digestive problems (stomach upsets, indigestion or damage to the lining of the stomach) so in most cases they'll be prescribed along with a drug called a proton pump inhibitor (PPI), which will help to protect your stomach.

NSAIDs also carry an increased risk of heart attack or stroke. Although the increased risk is small, your doctor will be cautious about prescribing them if there are other factors that may increase your overall risk, for example, smoking, circulation problems, high blood pressure, high cholesterol or diabetes.

**Special shoes or insoles (orthoses)** (see Figure 6) can relieve arch pain or tiredness and help to correct less severe cases of valgus heel.

**A steroid injection** may be recommended if just one or two joints are inflamed and painful, and it might help inflamed tendons or bursae, neuromas and plantar fasciitis. You'll need to rest the foot for up to 48 hours after the injection to get the best result.

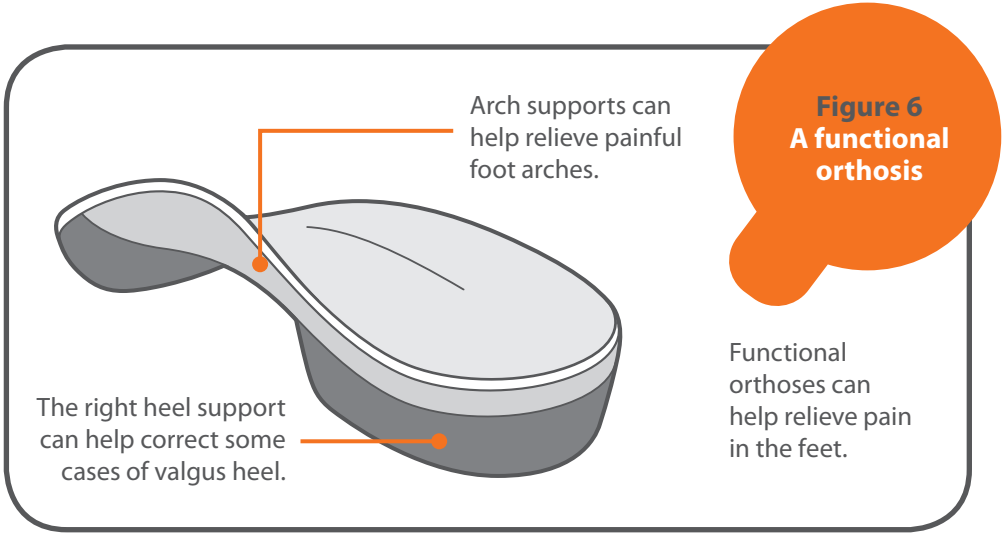



**Figure 6**
**A functional orthosis**

Functional orthoses can help relieve pain in the feet.

**Disease-modifying anti-rheumatic drugs (DMARDs)** are prescribed for some people with inflammatory arthritis. They act by altering the underlying disease rather than treating the symptoms. They're not painkillers, though they'll reduce pain, swelling and stiffness over a period of weeks or months by slowing down the disease and its effects on the joints. A common example is methotrexate.

**See Arthritis Research UK booklet and drug leaflets** *Pain and arthritis; Methotrexate; Non-steroidal anti-inflammatory drugs; Local steroid injections.*

**Surgery** is sometimes recommended to improve the structure of your feet. If other treatments haven't helped, surgery may be suggested to:

- correct valgus heel or hammer toes
- remove a neuroma or rheumatoid nodules
- remove part of the bone from a bunion and reshape the toes.

You'll normally be referred to an orthopaedic surgeon if surgery is suggested. However, some HPC-registered podiatrists can also perform foot surgery.

Joint replacements for the ankle and foot aren't yet as successful as replacement knees and hips. Most foot surgery is aimed at correcting the positions of the joints by resetting the bones or fusing the joint in the corrected position. Your surgeon will discuss the potential pros and cons of all the available options before you decide to go ahead with surgery.

**See Arthritis Research UK booklet** *Foot and ankle surgery.*

## Self-help and daily living

### Exercise

Exercise is important for keeping your joints moving and helping you stay at a healthy weight. Losing weight if you're overweight can be difficult, but it does help ease the pressure on your joints. Swimming and other non-weight-bearing exercises are best if painful feet make it difficult to exercise. A physiotherapist may be able to suggest exercises to help with particular foot problems.

If your ankles feel stiff in the morning, allowing some time for the joints to loosen up will usually help. You might find that having a bath or shower helps because the warm water can ease stiffness. During the day, alternate between sitting and standing activities to take the pressure off your feet. Resting for 10 minutes at a time throughout the day can be helpful, especially if you keep your feet raised. This is particularly useful if you have plantar fasciitis or swollen ankles.

**See Arthritis Research UK booklets**
*Keep moving; Looking after your joints when you have arthritis; Physiotherapy and arthritis.*

## Footcare

You may need to take special care of your feet if you have arthritis, either because of the condition itself or because of the medications you take. A good, regular footcare routine will usually keep problems to a minimum:

- Wash your feet every day and dry them thoroughly, especially between the toes.
- Surgical spirit, which you can buy from chemists, helps if the skin between the toes becomes white and soggy-looking, but don't apply it to sore or cracked skin.
- Use a moisturising cream for dry skin, but don't apply it between the toes.
- Cut your toenails every 6–8 weeks. Cut straight across and use an emery board to file down the sharp edges to reduce the risk of ingrown toenails.
- Treat minor cuts, blisters or grazes by covering them with a dressing and keeping them dry. If they don't heal in 2–3 days, seek professional advice.
- If you suffer from ulcers on the feet, make sure you apply an appropriate dressing to broken skin and take further advice from your GP or rheumatology team. You may need antibiotics if the ulcers become infected.
- If you have athlete's foot (a skin infection that quite commonly occurs along with hammer toes, causing itching and sometimes a rash), thorough washing and drying between the toes will help. A cream or powder from the chemist will speed up the healing process.

If you have rheumatoid arthritis, the National Institute for Health and Clinical Excellence (NICE) recommends that you should have your feet checked by a professional every year. This can be done by your GP, rheumatologist or nurse, and if you have problems you should be referred to an HPC-registered podiatrist. Some people with rheumatoid arthritis also have a burning sensation in their feet at night. Using a hot water bottle filled with cold water can help but you should speak to your doctor about it, especially if this is a new symptom.

**Good supportive footwear is essential to improve pain and discomfort in the feet.**

**Comfort should be the main consideration when choosing shoes.**

Corns and calluses can usually be scraped away using a pumice stone or abrasive board. You should never use an open blade such as a scalpel or razor blade. Special skin files and scrapers may be suitable as long as you and your skin are in good health. Check with your doctor or an HPC-registered podiatrist first, especially if you have vasculitis, a history of skin ulcers, suffer with a circulatory disorder such as Raynaud's phenomenon or are on steroids. Pads and cushions available from the chemist may help with painful pressure points, but over-the-counter creams and medicated corn plasters aren't generally recommended. If you have vasculitis or heal slowly you should avoid these treatments altogether.

**See Arthritis Research UK booklet** *Vasculitis*.

If you can't care for your feet yourself, your GP or hospital consultant can refer you for professional care within the NHS. Most podiatry services accept patients on a self-referral basis. An HPC-registered podiatrist will help with troublesome nails, corns and calluses, and they'll provide advice on finding special shoes or orthoses. Some centres have access to an orthotist who'll be able to assess and provide ready-made or custom-made shoes as required.

## Complementary medicine

Therapeutic massage can help to reduce pain or tiredness in the feet. It can be combined with a relaxing warm-water footbath, and both of these are fine as long as you don't have any open wounds or sores on your feet. The effectiveness of treatments such as acupressure sandals and magnetic insoles isn't supported by medical evidence.

Generally speaking, complementary and alternative therapies are relatively well tolerated, although you should always discuss their use with your doctor before starting treatment. There are some risks associated with specific therapies. In many cases the risks associated with complementary and alternative therapies are more to do with the therapist than the therapy. This is why it's important to go to a legally registered therapist, or one who has a set ethical code and is fully insured.

If you decide to try therapies or supplements, you should be critical of what they're doing for you, and base your decision to continue on whether you notice any improvement.

**See Arthritis Research UK booklet** *Complementary and alternative medicines for arthritis.*

## Footwear

Comfort should be the main consideration when choosing shoes, although for most people it's important that their footwear looks good too. If your feet are painful or unusually shaped you may need to compromise a little on the style. There's good evidence to show that shoes that don't fit properly can damage your feet.

! High-heeled shoes or shoes that pinch your feet are likely to cause deformities such as bunions or hammer toes.

Your feet may change shape as you get older, especially if you have arthritis, so you may need to try a different size or width fitting. If the footwear protects your feet against injuries, supports them and keeps them warm, dry and comfortable, it's doing its job.

Figure 7 shows the main parts of a shoe. Leather uppers are usually the most comfortable if you have foot problems. Look for a flexible sole unless you've been advised by a doctor or podiatrist that rigid soles are better for your particular foot problem. If you have hammer toes or prominent joints, look for a smooth lining without seams. If you need special insoles or orthoses, make sure there's enough room in the shoes to fit them, especially around the toe area.

Around the house, slippers may feel the most comfortable for hammer toes and prominent joints, but make sure the soles provide enough cushioning. Always wear shoes when you're outside to make sure your feet are properly supported.

### Factors to consider when buying shoes

Think about the following things when you're buying new shoes:

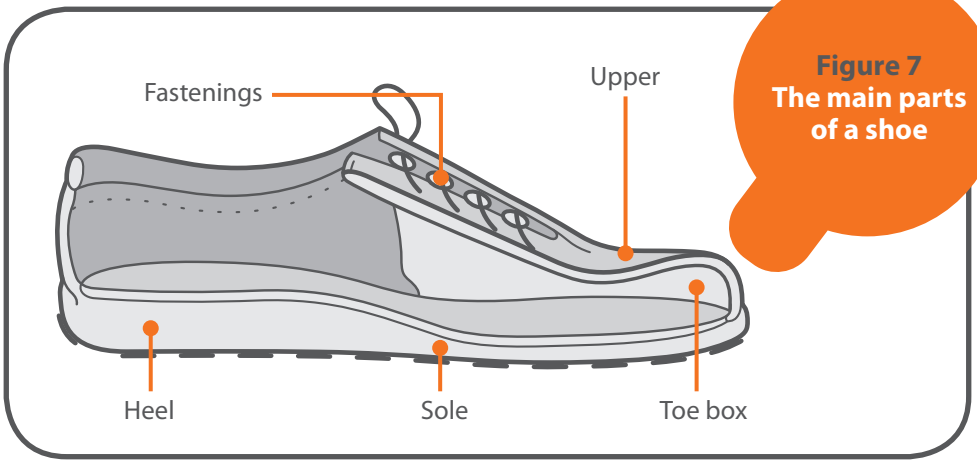



**Figure 7**
**The main parts of a shoe**

**Have your feet measured** if they've become wider over the years or have changed shape because of arthritis. Your feet may change shape when you stand up, so have them measured while standing. Many shops have experienced fitters who can help you with this.

**Try shopping later in the afternoon.** If your feet tend to swell, they'll be at their largest at that time.

**Judge a shoe by how it feels on your foot and not just by the size marked on the shoe.** Size varies between shoe brands and style. Think about how the shoe fits around your toes, under the soles and at the back of the heels.

**Always buy your shoes to fit the larger foot** – many people have one foot bigger than the other. An insole can be used in the other shoe. There should be at least 1 cm (3/8 inch) of room at the front of the longest toe.

**Try shoes on with the type of socks or stockings you normally wear** or with any insoles or orthoses you normally use. Some insoles may need extra depth, especially in the toe area.

**Don't buy shoes to break-in later** – the right shoes for you will be comfortable when you first try them on.

**Soles should be light, hard-wearing and flexible.** The sole should be able to bend along an imaginary line drawn from the base of the big toe to the base of the little toe.

**Buy shoes that have both leather uppers and inners** (the inner lining) if possible. These are more breathable than inners made of synthetic materials and will help to avoid dampness and fungal infections.

**Look for dark colours and a suede finish** if you're worried about the appearance of your feet – they'll help to disguise the problem.

## Insoles

You may need insoles in your shoes for a number of reasons. If you have one foot bigger than the other, an insole can help to pad out the shoe of your smaller foot. An insole or orthosis can help to support the arch of your foot. If you have arthritis in the joint across the middle of your foot (the midtarsal joint), a rigid insole may help.

Insoles will often take up half a shoe size, so take along your largest shoes when you go for an insole fitting. Sometimes you may need to purchase a larger shoe to accommodate an insole, although this isn't always the case. Take your insoles along when you buy new shoes.

If you need to wear a prescribed insole, don't try to wear it all day when you first receive it. Wear it for a short period at first and gradually build up to longer periods. If you change your shoes indoors, either have a second pair of insoles for your indoor shoes or remember to swap the insoles over. Your feet will return to their old shape while indoors and will never be comfortable if you don't continue to wear your insoles.

## Fastenings

Lace-up shoes can be difficult to fasten if you have arthritis in your hands. Here are a few alternatives:

- Elastic laces can be easier to use because one pull ensures a snug fit and they don't need to be tied.

**Insoles will often take up half a shoe size, so take along your largest shoes when you go for an insole fitting.**

- Many shoes are now available with Velcro fastenings, which can be done up and adjusted using only one hand.
- A zip fastening can be easier to manage than laces or buckles, and a ring (such as a keyring) added onto the zip can make it easier to pull up.

There are also a number of devices currently available to help people with putting on socks, tights/stockings and shoes. Useful leaflets on this and other subjects related to the feet and footwear are available from the Disabled Living Foundation or through your local occupational therapist.

**See Arthritis Research UK booklet** *Occupational therapy and arthritis.*

## Struggling to find the right shoes?

People with permanently swollen feet, very narrow, long, or broad feet, or with hammer toes or bunions may find it difficult to find shoes that fit well.

A number of retailers are beginning to stock shoes with extra width and depth, which can help. It may also be possible to have high-street footwear adapted by an orthotist – ask them for advice.

Some people may have footwear prescribed especially for them by their consultant, GP or by an HPC-registered podiatrist, but they're usually provided by an orthotist. You can also opt to see an orthotist or orthopaedic shoemaker privately. Each NHS hospital trust will have its own arrangements for footwear referral and entitlements.

## Wearing slippers around the house

Many people prefer to wear slippers in the house. However, slippers aren't a good idea for those who have to wear special insoles. They also sometimes contribute to falls in the elderly.
The uppers of slippers are often soft, so they're comfortable for hammer toes and prominent joints, but the soles may lack adequate cushioning and grip. Like outdoor shoes, slippers should fit properly and shouldn't be too loose. Backless slippers and slippers with a high heel really should be avoided.

The features of the ideal slipper are generally the same as for the ideal shoe.

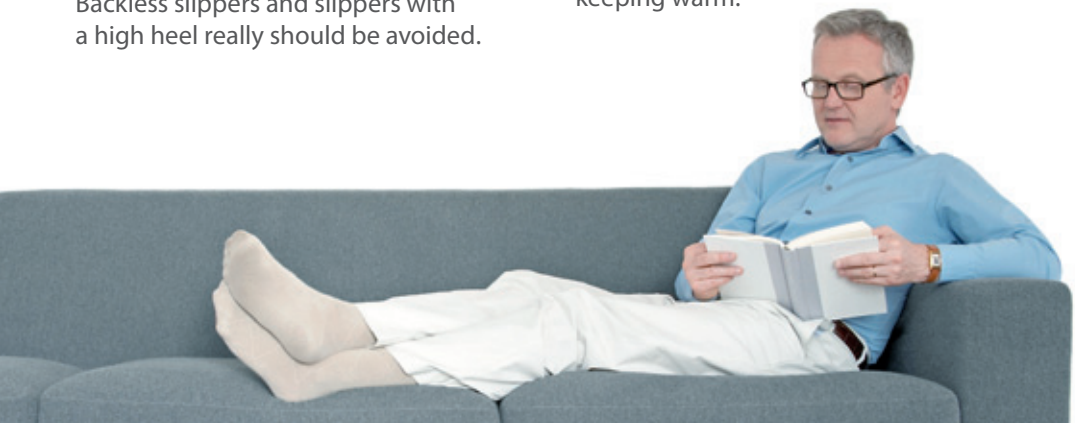
## Wearing safety footwear

If you need to wear safety boots for work, they should display the British Kitemark or CE mark. If your existing safety footwear is uncomfortable, you may need to talk to your employer about getting alternatives. Safety versions of extra-depth and cushioned shoes are available. If you suffer from toe or foot ulceration, make sure that safety footwear isn't causing pressure or pain to the wounds.

## Dealing with cold feet

Many slippers, shoes and boots are available with linings such as sheepskin or synthetic fur to help keep the feet warm. Wearing thicker socks or two pairs (as long as they're not too tight) not only helps to keep the feet warm but also provides extra cushioning under the soles of the feet. Keeping the feet warm will also be easier if you keep the rest of your body warm.

The Raynaud's & Scleroderma Association produces a leaflet containing tips for keeping warm.



**Like outdoor shoes, slippers should fit properly and shouldn't be too loose. Backless slippers and slippers with a high heel really should be avoided.**

**The features of the ideal slipper are generally the same as for the ideal shoe.**

## Glossary

**Ankylosing spondylitis** – an inflammatory arthritis affecting mainly the joints in the back, which can lead to stiffening of the spine. It can also affect the heels and can be associated with inflammation in tendons and ligaments.

**Bursa (plural bursae)** – a small pouch of fibrous tissue lined (like a joint) with a synovial membrane. Bursae help to reduce friction; they occur where parts move over one another, e.g. where tendons or ligaments pass over bones. Others, however, form in response to unusual pressure or friction – for example, with a bunion.

**Disease-modifying anti-rheumatic drugs (DMARDs)** – drugs used in rheumatoid arthritis and some other rheumatic diseases to suppress the disease and reduce inflammation. Unlike painkillers and non-steroidal anti-inflammatory drugs (NSAIDs), DMARDs treat the disease itself rather than just reducing the pain and stiffness caused by the disease. Examples of DMARDs are methotrexate, sulfasalazine, gold, infliximab, etanercept and adalimumab.

**Enthesopathy** – pain or discomfort at the point where a tendon or ligament inserts into a bone (the enthesis).

**Fascia** – connective tissue that wraps around muscles, blood vessels and nerves to bind them together.

**Gout** – an inflammatory arthritis caused by a reaction to the formation of urate crystals in the joint. Gout comes and goes in severe flare-ups at first, but if not treated it can eventually lead to joint damage. It often affects the big toe.

**Hallux rigidus** – osteoarthritis of the big toe joint with a stiff, often painful, big toe.

**Hallux valgus** – a condition in which the big toe pushes across towards the other toes, often associated with osteoarthritis of the big toe joint. It's often referred to as a bunion, although in fact a bunion can exist without hallux valgus.

**Inflammation** – a normal reaction to injury or infection of living tissues. The flow of blood increases, resulting in heat and redness in the affected tissues, and fluid and cells leak into the tissue, causing swelling.

**Ligaments** – tough, fibrous bands anchoring the bones on either side of a joint and holding the joint together. In the spine they're attached to the vertebrae and restrict spinal movements, therefore giving stability to the back.

**Non-steroidal anti-inflammatory drugs (NSAIDs)** – a large family of drugs prescribed for different kinds of arthritis that reduce inflammation and control pain, swelling and stiffness. Common examples include ibuprofen, naproxen and diclofenac.

**Occupational therapist** – a therapist who helps you to get on with your daily activities (e.g. dressing, eating, bathing) by giving practical advice on aids, appliances and altering your technique.

**Orthosis (plural orthoses)** – a device to help part of the body to work better. An orthosis is used to provide support or to adjust the mechanical function of a joint, for example for the foot or ankle. Most foot orthoses are insoles worn inside the shoe. They may range from very rigid to soft depending on their purpose. Orthoses are also referred to as functional orthoses.

**Orthotist** – a trained specialist who prescribes and fits special shoes and orthoses.

**Osteoarthritis** – the most common form of arthritis (mainly affecting fingers, knees, hips), causing cartilage thinning and bony overgrowth.

**Osteophyte** – an overgrowth of new bone around the edges of osteoarthritic joints. Spurs of new bone can alter the shape of the joint and may press on nearby nerves.

**Physiotherapist** – a therapist who helps to keep your joints and muscles moving, helps ease pain and keeps you mobile.

**Plantar fasciitis** – pain in the arch of the foot caused by strain to a band of tough fibres that runs from the heel to the base of the toes (the plantar fascia). This term is often wrongly applied to any type of pain in the arch.

**Podiatrist** – a trained foot specialist. The terms podiatrist and chiropodist mean the same thing, although podiatrist tends to be preferred by the profession. NHS podiatrists and chiropodists are HPC-registered, having followed a 3-year university-based training programme. The podiatrist or chiropodist can deal with many of the foot problems caused by arthritis.

**Proton pump inhibitor (PPI)** – a drug that acts on an enzyme in the cells of the stomach to reduce the secretion of gastric acid. They're often prescribed along with non-steroidal anti-inflammatory drugs (NSAIDs) to reduce side-effects from the NSAIDs.

**Psoriatic arthritis** – an inflammatory arthritis linked to the skin condition psoriasis.

**Raynaud's phenomenon** – a circulatory problem that causes the blood supply to certain parts of the body to be greatly reduced. It can make the fingers and toes go temporarily cold and numb and they turn white, then blue, then red. Raynaud's phenomenon can also occur with the condition scleroderma.

**Reactive arthritis** – a specific type of inflammatory arthritis that usually occurs after a mild infection.

**Rheumatoid arthritis** – an inflammatory disease affecting the joints, particularly the lining of the joint. It most commonly starts in the smaller joints in a symmetrical pattern – that is, for example, in both hands or both wrists at once.

**Scleroderma** – a medical condition characterised by hardening and tightening of the skin. It often affects other parts of the body as well – including the connective tissues that surround the joints, blood vessels and internal organs.

**Tendon** – a strong, fibrous band or cord that anchors muscle to bone.

**Vasculitis** – inflammation of the walls of blood vessels. This can cause the blood flow to be reduced. Vasculitis can occur on its own (this is called primary vasculitis) or in people who already have an established disease (this is called secondary vasculitis). Secondary vasculitis can happen with a number of different rheumatic diseases, including Sjögren's syndrome, rheumatoid arthritis and lupus.

## Where can I find out more?

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

### Conditions

- *Ankylosing spondylitis*
- *Gout*
- *Osteoarthritis*
- *Psoriatic arthritis*
- *Raynaud's phenomenon*
- *Reactive arthritis*
- *Rheumatoid arthritis*
- *Scleroderma*
- *Vasculitis*

### Surgeries

- *Foot and ankle surgery*

### Therapies

- *Occupational therapy and arthritis*
- *Physiotherapy and arthritis*

### Self-help and daily living

- *Complementary and alternative medicine for arthritis*
- *Keep moving*
- *Looking after your joints when you have arthritis*
- *Pain and arthritis*

### Drug leaflets

- *Local steroid injections*
- *Methotrexate*
- *Non-steroidal anti-inflammatory drugs*

You can download all of our booklets and leaflets from our website or order them by contacting:

**Arthritis Research UK**
PO Box 177
Chesterfield
Derbyshire S41 7TQ
Phone: 0300 790 0400
www.arthritisresearchuk.org

## Related organisations

The following organisations may be able to provide additional advice and information:

**Arthritis Care**
18 Stephenson Way
London NW1 2HD
Phone: 020 7380 6500
Helpline: 0808 800 4050
www.arthritiscare.org.uk

**Disabled Living Foundation**
380–384 Harrow Road
London W9 2HU
Phone: 020 7289 6111
Helpline: 0845 130 9177
www.dlf.org.uk

**National Rheumatoid Arthritis Society (NRAS)**
Unit B4, Westacott Business Centre
Westacott Way
Littlewick Green
Maidenhead SL6 3RT
Phone: 0845 458 3969 or 01628 823524
Helpline: 0800 298 7650
www.nras.org.uk

**Raynaud's & Scleroderma Association**
112 Crewe Road
Alsager
Cheshire ST7 2JA
Phone: 01270 872776 or 0800 917 2494
www.raynauds.org.uk

**Society of Chiropodists & Podiatrists**
1 Fellmonger's Path
Tower Bridge Road
London SE1 3LY
Phone: 020 7234 8620
www.feetforlife.org

# We're here to help

Arthritis Research UK is the charity leading the fight against arthritis.

We're the UK's fourth largest medical research charity and fund scientific and medical research into all types of arthritis and musculoskeletal conditions.

We're working to take the pain away for sufferers with all forms of arthritis and helping people to remain active. We'll do this by funding high-quality research, providing information and campaigning.

Everything we do is underpinned by research.

We publish over 60 information booklets which help people affected by arthritis to understand more about the condition, its treatment, therapies and how to help themselves.

We also produce a range of separate leaflets on many of the drugs used for arthritis and related conditions. We recommend that you read the relevant leaflet for more detailed information about your medication.

Please also let us know if you'd like to receive our quarterly magazine, Arthritis Today, which keeps you up to date with current research and education news, highlighting key projects that we're funding and giving insight into the latest treatment and self-help available.

We often feature case studies and have regular columns for questions and answers, as well as readers' hints and tips for managing arthritis.

## Tell us what you think of our booklet

Please send your views to:
**feedback@arthritisresearchuk.org**
or write to us at:
Arthritis Research UK, PO Box 177, Chesterfield, Derbyshire S41 7TQ.

A team of people contributed to this booklet. The original text was written by Dr Tony Redmond and Dr Deborah Turner, who have expertise in the subject. It was assessed at draft stage by clinical nurse specialists Natasha Banya and Sue Brown, rheumatology specialist nurse Debbie Bond, Dr Anshuman Malaviya and consultant rheumatologist Nicholas Shenker. An **Arthritis Research UK** editor revised the text to make it easy to read, and a non-medical panel, including interested societies, checked it for understanding. An **Arthritis Research UK** medical advisor, Angela Jacklin, is responsible for the overall content.

Arthritis Research UK

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**Or go to:**
www.arthritisresearchuk.org

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