Arthritis Research UK

Condition
Foot pain

Foot pain

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

Arthritis Research UK booklets are produced and printed entirely from charitable donations.

What should I know about about foot pain?

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 terms – we've underlined these when they're first used in the booklet.

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At a glance
Foot pain

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

What typical foot problems are there?

Ankles and heels

- valgus heel, or inrolling of the heel
- plantar fasciitis, or heel pain syndrome.

Arches

- changes in the structure of the arch
- strain in muscles, ligaments or tendons.

Ball of the foot

- corns and calluses
- bursae
- neuroma
- tendon strain
- nodules.

Toes

- corns and calluses
- bunions
- hammer toes.

What causes foot pain?

The main causes of foot pain are:

- osteoarthritis
- inflammatory arthritis
- soft tissue aches and pains
- nerve damage
- poor circulation
- ill-fitting footwear
- connective tissue diseases.

Should I seek professional help?

Seek help if you:

- have a condition that impairs the blood flow to your skin
- are on immune supressing drugs
- have a history of poor skin healing
- notice your foot is changing shape or colour.

What can I do to help myself?

- take painkillers
- lose weight if you are overweight
- have a regular footcare routine
- have supportive shoes/trainers.

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

What treatments are there for foot pain?

Most people will be able to care for their foot pain themselves. If needed, specific treatments include:

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

What footwear should I choose?

Your foot may change size with weight gain/loss, arthritis, age and swelling. Footwear should fit properly and comfort should be the main consideration.

Who can help?

If you see a rheumatologist, GP or nurse regularly, you can ask them who else you could see. This may be a:

- podiatrist
- orthotist
- physiotherapist.

Make sure whoever you see is registered with the Health and Care Professionals Council (HCPC).

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 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. Problems in the feet and ankles are often, but not always, associated with arthritis.

Most feet have an arch shape that spreads the body's weight 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.

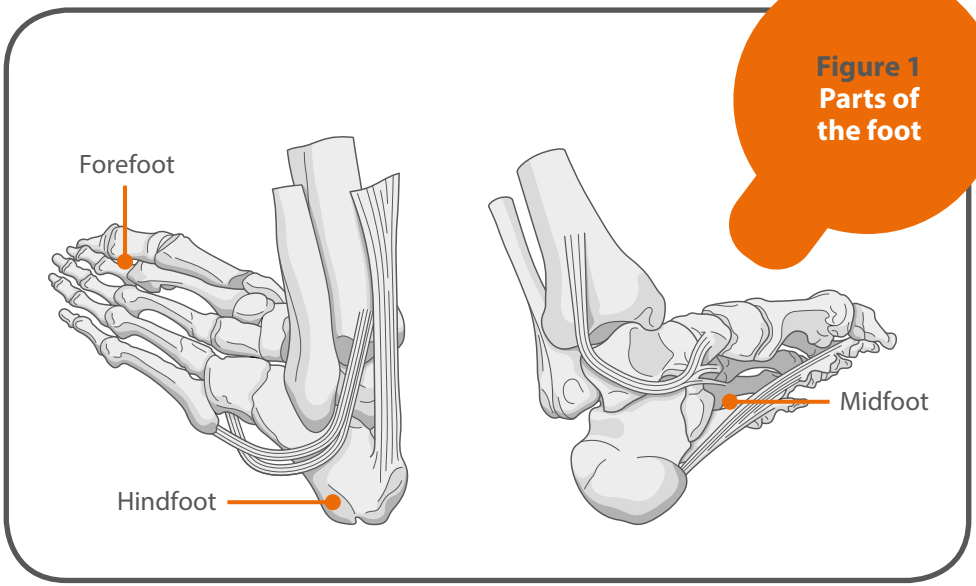

Figure 1 Parts of the foot

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 joint in the foot. Osteoarthritis is a chronic problem that may cause episodic joint pain and joint swelling, and bone enlargement. 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 larger and knobbly due to an overgrowth of new bone. These changes may accompany a bunion (a lump on the side of the big toe joint). You may also notice a bunionette (a lump on the side of the little toe joint).

Recent findings suggest that osteoarthritis is more common in the arch area of the foot than previously thought. Osteoarthritis can also develop in the ankle, but this is 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.

See Arthritis Research UK booklet *Osteoarthritis.*

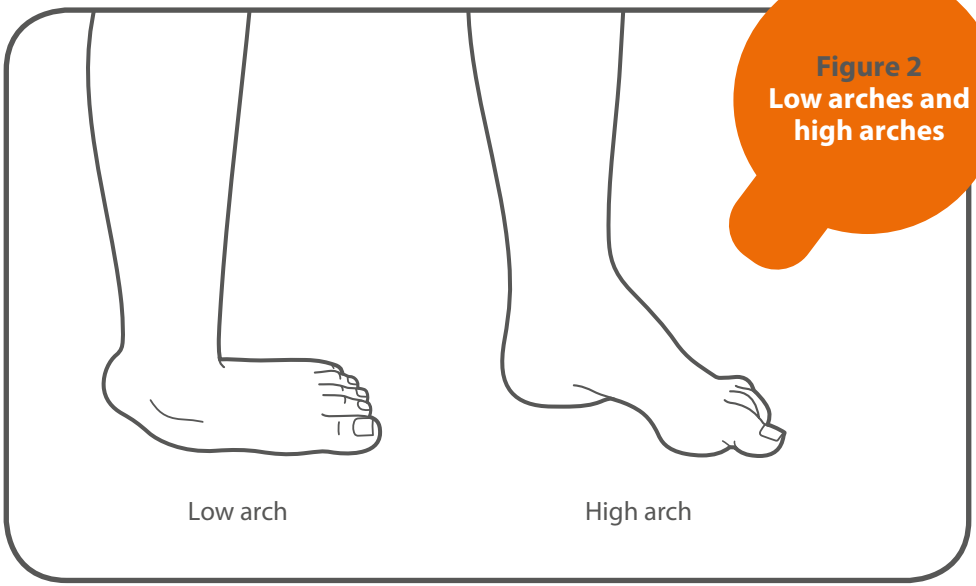

Figure 2
Low arches and high arches

Inflammatory arthritis

There are various forms of inflammatory arthritis, which can affect the feet in different ways.

Rheumatoid arthritis	• affects many joints in the foot.
Reactive arthritis	• usually affects the ankle or around the heel. • 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 ('sausage toe'). It's commonly associated with psoriatic and reactive arthritis.

Gout is a very painful type of arthritis. It's 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. The joint will be red, hot and swollen during an attack, which typically last one to two weeks. Without treatment, repeated attacks can cause permanent joint damage, leading to osteoarthritis. Gout can usually be controlled with medications.

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

Connective tissue disease

Raynaud's phenomenon is a circulatory problem that causes the blood supply to certain parts of the body to be reduced, especially when exposed to cold conditions. It more commonly affects fingers, but it can also cause toes to go temporarily cold and numb and turn white, then blue, then red. These attacks often only last a few minutes, and moving into a warmer environment often stops the attack. Wearing warm socks may help to prevent an attack. Raynaud's phenomenon can occur with the conditions rheumatoid arthritis, scleroderma or systemic lupus erythematosus (SLE).

Watch out for ulcers on the toes, or a colour change which doesn't go away as quickly as usual. These problems are usually very painful. If you develop one of these symptoms, you should see your doctor or contact your rheumatology nurse specialist as soon as possible.

Sometimes with lupus the joints and tendons are affected and you may notice that the toes drift outwards and the

arches may flatten. This can be painful and may cause a feeling of stiffness after periods of rest.

See Arthritis Research UK booklets
Lupus (SLE); Raynaud's phenomenon; Systemic sclerosis (scleroderma).

What other kinds of foot problems are there?

Problems in the ankles and heels

Pain in the ankles and heels can come from the joints themselves or 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 due to inflammatory arthritis. When inflammatory arthritis affects the ankle, the joint may be sore or stiff first thing in the morning or after sitting for a while.

Valgus heel

Valgus heel is commonly associated with tendon damage on the inside of the ankle and arch; this can cause 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. It's fairly common in people with rheumatoid arthritis and research has shown that early treatment of rheumatoid arthritis may slow the development of valgus heel.

Plantar heel pain syndrome

Also known as plantar fasciitis, this is a degeneration and/or inflammation at the heel, where tendons and fascia that attach under the heel bone cause pain. It used to be known as policeman's heel and is the most common cause of discomfort around the heel. Plantar fasciitis frequently affects people aged 40

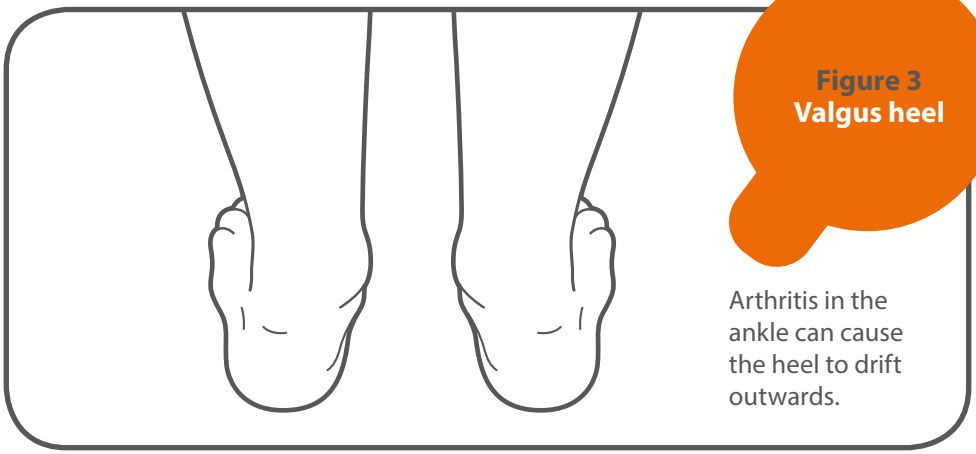

Figure 3
Valgus heel

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.

to 50 with active occupations. It can be associated with inflammatory arthritis.

Research has shown that plantar fasciitis is sometimes caused by the shortening of the Achilles tendon and that exercises to stretch it usually helps. Losing weight and wearing insoles to provide cushioning in your shoes may ease symptoms. A steroid injection can help but they're not recommended as a first resort.

Achilles tendinopathy

Also known as Achilles tendinitis, this is an inflammation of the Achilles tendon at the back of the ankle. It occurs as an over-use injury in people who take part in excessive exercise or exercise they're not used to (i.e. marathon runners). It's also found in people who have psoriatic arthritis, reactive arthritis or ankylosing spondylitis.

Changes in the structure of the arch

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 be more painful if the muscles or tendons are 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 foot orthoses helpful for arch pain or tiredness. Non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, 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. You can buy this in chemists and supermarkets. Anti-inflammatory tablets 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 cap pain.

Problems 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. However, most pain in the ball of the foot comes from minor damage to the soft tissues – 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 pressure is extremely high, small areas of skin within the callused area produce an abnormal type of skin tissue, leading to the formation of a corn.

- Remember that the callus will grow back in four to six weeks unless the pressure or friction that caused it is removed by changing to softer or roomier footwear or by inserting cushioning pads.

Bursae

Bursae are pockets of fluid that cushion joints and tendons. They can become inflamed under the ball of the foot and cause pain, particularly if wearing high heels or tight shoes, or by doing too much weight-bearing exercise.

People with rheumatoid arthritis often develop new and large bursae under the ball of the foot (see Figure 4). Bursae can grow and shrink as the level of inflammation varies. They also occur next to large bunions or other irritated joints. Treatment for an inflamed bursa starts with reducing the pressure on the area. 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 sudden pain and/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 HCPC-registered podiatrist or orthotist. A local steroid injection may be recommended and, if symptoms are severe, the thickened nerve may be surgically removed.

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.

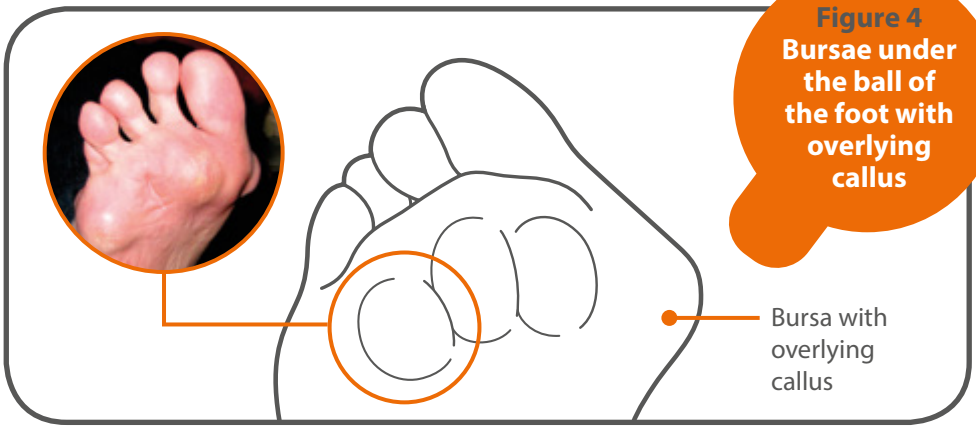

Figure 4
Bursae under the ball of the foot with overlying callus

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

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). 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. The big toe joint becomes stiff and its range of movement is reduced sometimes without the bony lump. This is called hallux rigidus. This can cause the other toes to become clawed or permanently bent (known as hammer toes).

Symptoms of a bunion can be controlled by choosing shoes with a soft, wide upper to reduce pressure and rubbing on the joint. Insoles (orthotics) can help control the foot function to relieve pressure on a painful joint. Bunion pads are available from chemists if you have a flare-up of a bunion or bursa. If symptoms persist over a long period, the bunion may need to be surgically removed.

Hammer toes

Hammer toes (also known as claw toes, mallet toes or retracted toes) are toes that are permanently bent (see Figure 5).

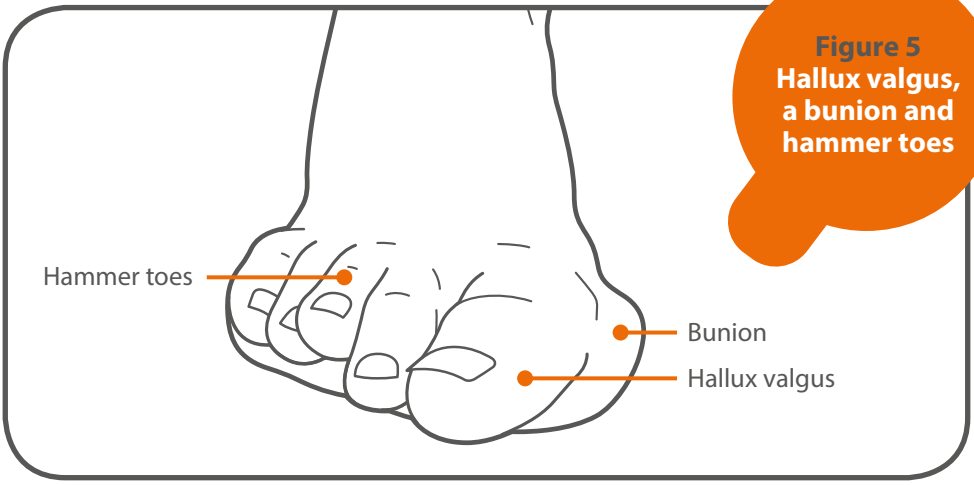

Figure 5
Hallux valgus, a bunion and hammer toes

Hammer toes occur because of problems with the tendons inside the foot or because 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 a slight risk of ulceration.

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

Rheumatoid arthritis, lupus, scleroderma and diseases such as diabetes that affect the bones, circulation and nerves can cause ulcers (delayed healing and foot sores).

Ulcers on the toes and feet can be problematic in people with rheumatoid arthritis and scleroderma, where the circulation is compromised due to Raynaud's phenomenon. If you discover an open sore that won't heal, speak to your specialist rheumatology team at the hospital, which may include a nurse specialist and an HCPC-registered podiatrist, or a GP. If you're on steroids or biologics, it's important to treat ulcers as soon as possible because your risk of infection is greater. Ulcers which have become infected may require treatment with antibiotics. Medications to improve the blood flow can help.

Should I seek professional help?

For most people foot problems can come and go without any prescribed treatment, or can respond well to self-treatment.

However, if you have a known condition such as rheumatoid arthritis, scleroderma or diabetes, you should discuss any new foot problems with your rheumatologist, your GP or a podiatrist.

Even if you don't have any significant health conditions you should still seek help if your foot problem:

- involves ulceration of the skin or infection
- impairs the blood flow to the skin
- has caused pain for more than three months
- is getting noticeably worse
- is changing the colour of your skin – especially if it is dark blue or black
- is leading to progressive changes in the shape of your foot.

You should also seek help if you develop foot problems and you have increased swelling, you're on drugs which supress your immune system (including steroids or biologics) or if you have a history of poor skin healing.

How are foot problems diagnosed?

In most cases a simple clinical examination is all that is required. This usually involves looking carefully for signs such as swelling, combined with a short hands-on exam to work out which structures might be involved. Sometimes it is helpful to have the person walk up and down to see what happens during weight-bearing and routine activities. It is less common for foot problems to require blood tests or imaging (e.g X-ray or ultrasound) to reach a diagnosis.

What can I do to help myself?

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 biologics, or your skin is slow to heal. The routine should include regular nail cutting, filing the skin and applying appropriate foot care cream. Choosing the right footwear is important.

Good footwear, which is supportive and comfortable, is essential to improve pain and discomfort in the feet.

Exercise

Exercise is important to keep your joints moving and helps you keep to a healthy weight. Losing weight if you're overweight can be difficult, but will help ease pressure on painful feet. Swimming and other non-weight-bearing exercises are best if painful feet make exercise difficult. An HCPC-registered physiotherapist or podiatrist may be able to suggest exercises.

If your ankles feel stiff in the morning, allowing some time for the joints to loosen up will usually help. Warm water from a bath or shower can ease stiffness. During the day, alternate between sitting and standing activities to take the pressure off the 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; Physiotherapy and arthritis.

Footcare

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

- Wash your feet daily and dry them thoroughly, especially between the toes.
- Surgical spirit will help if the skin between the toes becomes white and soggy-looking. Don't apply to sore or cracked skin.
- Use a dedicated foot cream with 100% urea concentration for dry skin.
- Cut toenails every six to eight weeks. Cut straight across and use an emery board to file down the sharp edges.
- Treat minor cuts, blisters or grazes by covering them with a dressing and keeping them dry. If they don't heal in two to three days, seek professional advice.
- If you suffer from ulcers on the feet, make sure you apply an appropriate dressing to broken skin and take advice from your GP, nurse or rheumatology team. You may need antibiotics if the ulcers become infected. If you're on biologics seek medical advice within 24 hours, because of risk of infection.
- If you have athlete's foot (a fungal skin infection, 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.

- Toenails can be affected by fungal infections. Topical application of anti-fungal paints and/or oral anti-fungal therapy can be obtained on prescription from a GP.

If you have rheumatoid arthritis, you should have your feet checked by a professional just after your diagnosis and then once a year. This can be done by your GP, rheumatologist or nurse, and if you have problems you should be referred to an HCPC-registered podiatrist. Some people with rheumatoid arthritis 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.

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, although these will not help much with corns where the nucleus goes deeper into the skin. Check with your doctor or an HCPC-registered podiatrist first, especially if you have a history of skin ulcers or suffer with scleroderma, vasculitis, lupus or Raynaud's phenomenon.

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're on steroids or biologics, have vasculitis or your skin heals slowly you should avoid these treatments altogether.

If you can't care for your feet yourself, your GP or hospital consultant can refer you for professional care within the NHS. Podiatry services accept patients on a self-referral basis. An HCPC-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 will be able to assess and provide ready-made or custom-made shoes as required.

Good footwear, which is supportive and comfortable, is essential to improve pain and discomfort in the feet.

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. 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 will be prescribed along with a drug called a proton-pump inhibitor (PPI), which will help to protect the 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.

Insoles (orthoses), sometimes used with special shoes, 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.

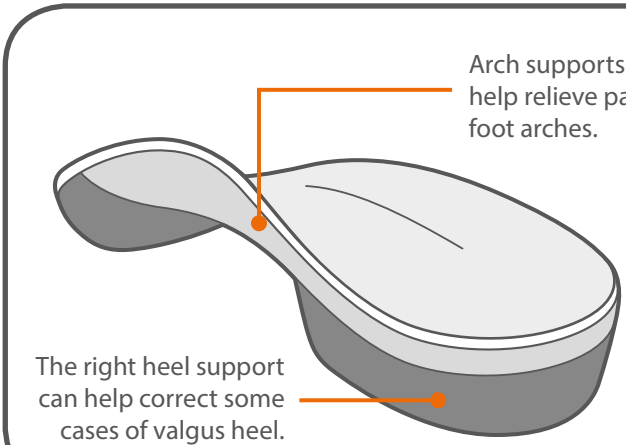

Figure 6
A functional orthosis

Functional orthoses can help relieve pain in the feet.

Disease-modifying anti-rheumatic drugs (DMARDs) are prescribed for some people with inflammatory arthritis. They alter the underlying disease rather than treat 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 *Local steroid injections; Methotrexate; Non-steroidal anti-inflammatory drugs; Pain and arthritis.*

Biologics

There are a few foot-specific points to consider in relation to biologic drugs used to treat inflammatory arthritis such as rheumatoid or psoriatic arthritis. First, if you have persisting foot involvement while on other disease modifying anti-rheumatic drugs (DMARDs) you should discuss with your rheumatologist or nurse the options for starting a biologic. Often the feet are inadvertently overlooked.

If you're already on a biologic there are a few other considerations you'll need to bear in mind. Because biologics suppress the immune system, you need to be aware of the effect of biologics on infection. We don't think biologics make a difference to the overall risk of infections in your feet, but biologic use does seem to make infections take hold more quickly and cause greater trouble. If you're on biologics do not use corn plasters or skin scrapers and if you do have an ulcer or infection make sure you let your rheumatologist know **as soon as possible.**

In some people starting a biologic drug can result in a big improvement in joints in the upper body but problems can persist in the leg joints – we think this is because these weight-bearing joints may have already been damaged. If you do have ongoing aches and pains in feet, ankles and knees after starting biologics, again let your rheumatologist or nurse know. There are often additional treatments that can help.

Surgery

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
- relieve pain.

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.*

Complementary medicines

Therapeutic massage can help to reduce pain or tiredness in the feet. Massage 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 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.*

Why does foot pain become persistent?

In most cases foot problems will not become persistent. Painful heels for instance can settle down spontaneously even after many months of causing trouble. Some foot problems though will go on to be persistent, osteoarthritis is a good example. If you have foot symptoms that have persisted for more than three months it's worth seeking a professional opinion.

Footwear

Getting the right footwear will make a difference for almost all foot problems and the importance of appropriate footwear should not be underestimated. A bit of trial-and-error to get the right footwear might remove the need to seek out professional help. Changes to footwear will be part of most professional discussions about foot problems.

Comfort should be the main consideration when choosing shoes.

Comfort should be the main consideration when choosing shoes.

High-heeled shoes or shoes that pinch your feet can contribute to the development of 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.

An adjustable fastening will improve fit generally and help if the feet swell.

Leather uppers are usually the most comfortable if you have foot problems although many modern materials offer breathability, flexibility and comfort. Look for a cushioning 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 adequate cushioning. You should also make sure that they are non-slip/trip. Always wear shoes when you're outside to make sure your feet are properly supported.

Factors to consider when buying shoes

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.

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.

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. 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. If you have one foot bigger than the other, an insole can help to pad out the shoe of your smaller foot.

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 is not 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 the new insole all day

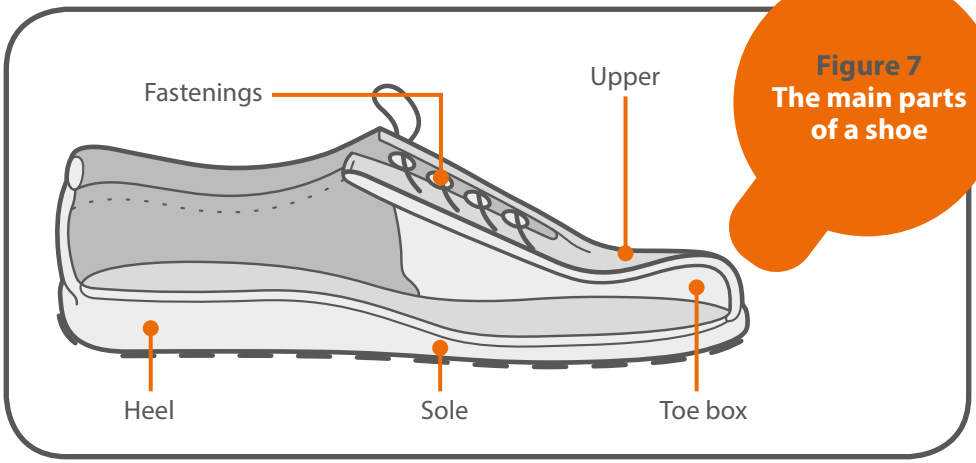

Figure 7
The main parts of a shoe

when you first receive it. Wear it for a short period at first and gradually build up to longer periods. Don't use them for heavy duty activity or exercise. 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.

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

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.
- 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 pull can make it easier to pull up.

There are also a number of devices 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 be possible to have high-street footwear adapted by an orthotist – ask them for advice.

Some people may have footwear prescribed by their consultant, GP or by an HCPC-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 is not 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.

What other help is available?

An HCPC-orthotist or podiatrist will be able to advise on special insoles and custom-made or adapted shoes. Rheumatology and general practice nurses are usually able to offer advice and assistance with routine foot care and possibilities for onward referral.

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.

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 orthoses for any part of the body, including insoles and special footwear. Check that your orthotist is HCPC registered.

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 HCPC-registered, having followed a three-year university-based training programme. The podiatrist or chiropodist can diagnose and 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.

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.

Systemic lupus erythematosus – often simply referred to as lupus, it's an autoimmune disease which can cause various symptoms in many different parts of the body, including joint pains, skin rashes and extreme tiredness (fatigue). It can affect 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?

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

We fund scientific and medical research into all types of arthritis and musculoskeletal conditions.

We work to take the pain away for sufferers with all forms of arthritis, and help people to remain active.

Everything we do is underpinned by research. By funding high-quality research we can provide information to patients and health professionals.

We produce a range of more than 90 booklets to help people affected by arthritis to understand more about the condition, its treatment, therapies and how to help yourself. We also produce a range of separate information leaflets on many of the drugs used for arthritis and related conditions. We recommend that you read the relevant drug leaflet for more detailed information about your medication. If you've found this information useful you might be interested in these other titles from our range:

Conditions

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

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*
- *Pain and arthritis*

Drug leaflets

- *Local steroid injections*
- *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
Copeman House
St Mary's Gate
Chesterfield
S41 7TD
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

British Association of Prosthetists and Orthotists (BAPO)
Sir James Clark Building,
Abbey Mill Business Centre,
Paisley, PA1 1TJ
Tel: 0141 561 7217
www.bapo.com
Email: enquiries@bapo.com

Disabled Living Foundation
4th Floor Jessica House
Red Lion Square
191 Wandsworth High Street
London
SW18 4LS
Helpline: 0300 999 0004
www.dlf.org.uk

National Rheumatoid Arthritis Society (NRAS)
Ground Floor
4 The Switchback
Gardner Road
Maidenhead
Berkshire
SL6 7RJ
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

Tell us what you think of our booklet

We hope that you have found our information booklet useful. Your feedback is very valuable to help us understand how people use our publications and to assist us in improving our service to you.

Please send your views to **feedback@arthritisresearchuk.org**, call **0300 790 0400** (calls charged at standard rate) or write to us at the address on the back cover.

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