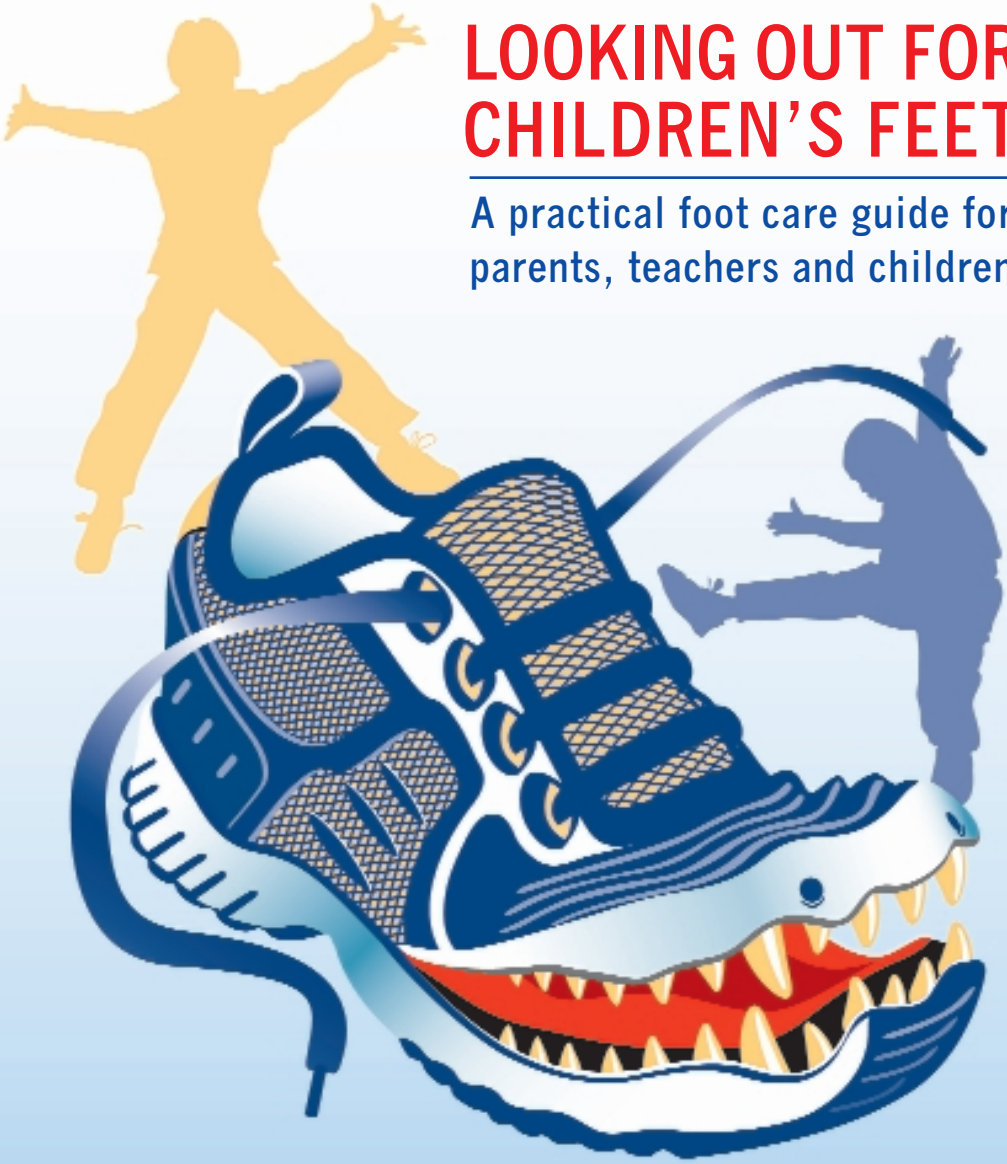
LOOKING OUT FOR CHILDREN'S FEET

A practical foot care guide for parents, teachers and children



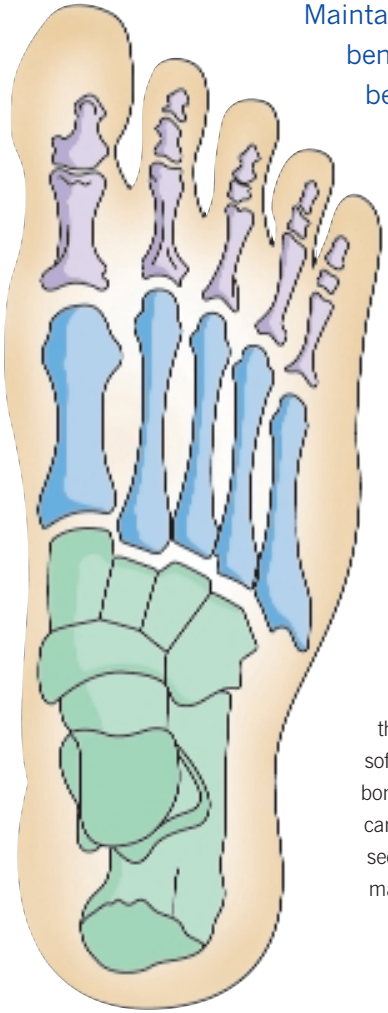
The Society of Chiropodists and Podiatrists

If your Buying Shoes guide is missing contact the Society of Chiropodists and Podiatrists to obtain a copy.

Image kindly supplied by Clarks shoes

Contents

Foot Facts



The human foot is a highly complex structure

Maintaining and caring for a child's feet will benefit their health, mobility and well-being throughout their entire lives. This guide provides concise practical advice and information on feet, their care and potential problems from birth until leaving school. It addresses the main problems that may be encountered with the young and developing foot and gives guidance on how you can keep children's feet in the best condition.

The human foot is a highly complex structure, composed of 26 bones working together to allow the foot to adapt to uneven walking surfaces, and acting as a shock absorber with each step. These bones are usually fully hardened by the age of 18. In the newborn, the foot is composed mainly of relatively soft and flexible cartilage which gradually converts to bone with age. In the young foot, the conversion to bone can be seen as areas that are known as 'primary and secondary centres of ossification'. On an X-ray, this can make the young foot look as though it has more bones

than an adult. This is not the case, and these centres gradually fuse to make individual bones. During this period of development, the foot can be at risk from injury and deformity due to ill-fitting footwear and great care should be taken with shoe types and shoe fitting.

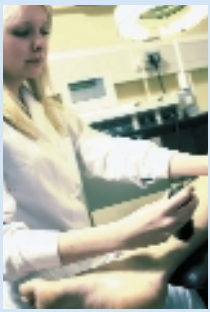
The foot also has a large number of ligaments binding the bones together and helping to form joints that allow free and painless movement. The foot contains approximately 19 muscles and numerous tendons running from the muscles in the lower leg to allow the foot to work as part of the leg, and allow proper walking. There is also a large network of blood vessels and nerves. All of these structures have to adapt to the changes in foot posture as the child grows.

As the old nursery rhyme goes, *'the foot bone's connected to the ankle bone, the ankle bone's connected to the leg bone, the leg bone's connected to the hip bone'*….so it should be remembered that the foot cannot be considered in isolation to the rest of the leg or body. Any postural foot abnormality could have an effect further up the body, altering posture and walking style. This is similar to the way that poor foundations can cause general structural problems and instability to a house.

Like poor house foundations, foot abnormalities can have an effect further up the body

What does the podiatrist do?

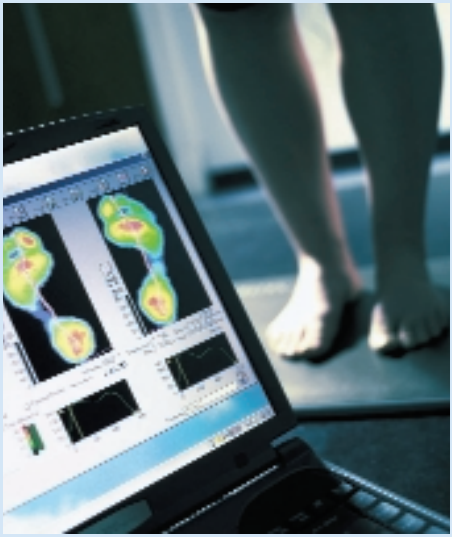
When treating children, it is important to remember that they are not small adults. They are physically and emotionally different and, most importantly from the registered podiatrist's point of view, they grow.



Many of the problems found on the paediatric foot are associated with growth, overuse, weight gain and postural change.

The podiatrist can help your child by providing an initial diagnosis and then either managing the condition or referring to an appropriate consultant.

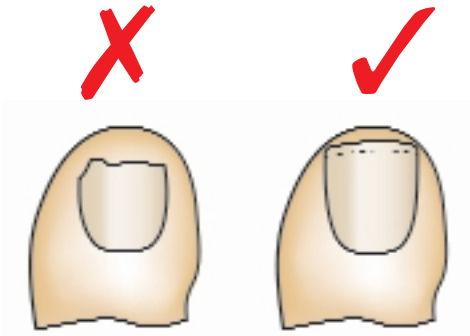
Treatment may take the form of footwear prescription or advice, biomechanical assessment – which determines the normal and abnormal functioning of the foot and lower limbs and often involves the provision of orthoses (special insoles) – active hands-on treatment and health education.



The role of the podiatrist is to prevent or correct deformity and maintain normal mobility and function. Podiatrists provide the basis for the ideal walking style and posture and identify any medical or surgical condition that may require further referral and management. They relieve pain, treat infections and skin, nail, soft tissue and connective tissue problems. This is done in conjunction with other members of the health care team.

Top tips for children's feet

- Always have your child's feet measured for length and width.
- Check the size of their socks.
- Inspect their shoes regularly for unusual wear and seek professional advice if you are concerned. Unusual wear may be the first indication that there is a problem with the foot posture or general posture and should always be investigated by your registered podiatrist. Normally, wear is across the back of the heel or between the back and the outside. You should look out for severe wear on the inside or outside of the heel which may carry forward to the sole of the shoe. The heel area of the upper may also be broken and bulge inside or outside.
- If possible, do not put your child in the same shoes every day. Alternate shoes to allow them to dry out, particularly if the foot is sweaty.
- Avoid the use of plimsolls in school all day every day. If a change of footwear is required in school, a fitted pair of lacing trainers is best.
- Be aware that blisters and sores may develop with new shoes.
- Inspect children's feet regularly for inflamed nails, red pressure marks on the top of the small joints of the toes, below the ankle bones and at the back of the heel.
- Remember that teenagers in particular can be secretive about foot problems and a trivial, easily rectified problem can be more serious if neglected.
- If they complain of itchy or painful sites or you see any rashes or hard, raised areas on the skin, seek professional advice immediately.
- Wash their feet daily with simple soap and water and dry well, particularly between the toes. After drying, a small amount of talcum powder should be used.
- Children have naturally sweaty feet, but smelly feet may be an indication of poor hygiene.
- The toenails should be inspected regularly and trimmed as required. A good investment is a pair of nail clippers from your local chemist. Never cut down the side of nails or cut them too short. When cutting, follow the line of the nail at the tip of the toe and always leave the corner of nail just clear of the fleshy part of the toe.



Footwear

Many people regard footwear as purely shoes but it relates to any covering for the foot and may include:

Babygrows and sleep suits

Care should be taken that the foot part is long enough and does not cram the toes.

Pram shoes

These should only be worn for special occasions. They are difficult to size and are best avoided. The best way to insulate the foot is with bootees that do not constrict the ankles or cram the toes.

Tights and socks

Tights and socks – particularly if regularly tumble dried – may shrink and the fit at the heel and length at the toes should be checked regularly, particularly if new shoes have been required because of growth.

Knitted bootees

Knitted bootees are ideal to keep the feet insulated but great care should be taken with their size and, if they are open weave, care must be taken to avoid fibres wrapping around the toe and cutting off the circulation.

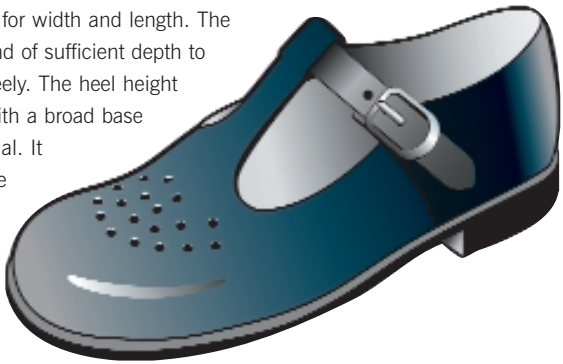
Shoes for toddlers and early walkers

These should be fitted by a trained shoe fitter and allow the foot to function normally. Remember that a young child's foot is a different shape from that of an adult or teenager whose foot tends to have a rectangular shape when looking at the sole. The shape of a young child's foot is triangular with a narrow heel and a broad front with the inner side of the foot angled inwards. Reputable manufacturers are aware of this and design their shoes accordingly. Ignoring this feature may lead to deformity of the big toe.

A children's foot is a different shape from an adult's

School shoes

It is always difficult to describe the ideal shoe, but a "school shoe" is normally visualised as being an ideal shoe. This means that the feet have been measured for width and length. The toe area is foot-shaped and of sufficient depth to allow the toes to move freely. The heel height is no greater than 4cm with a broad base of shock-absorbing material. It also fits snugly around the heel area. It is held on the foot with laces, Velcro or a strap and is made of leather.



Plimsolls

In order to reduce noise levels and keep floor coverings clean, many schools insist on children wearing plimsolls in school with their school shoes only being worn to and from school. Often the plimsolls are kept in a shoe bag at school overnight. As children's feet are very sweaty, it is unlikely that they will dry out overnight. Plimsolls are excellent for the purpose they were designed for but are an unsuitable environment for a growing foot. It is virtually impossible to have the feet measured for plimsolls. They do not come in half sizes and the rubber soling material encourages sweating and while shoes are often changed regularly, plimsolls are overlooked, so the child can end up with plimsolls that are too small. Children who cannot tie their shoe laces are often encouraged to wear slip-on plimsolls which may further encourage toe deformity.

Trainers

Trainers are generally foot friendly as long as the feet are measured. They usually conform to the school shoe 'model' (see 'School shoe', previous page). Beware of some trainers which, although leather, may have extensive synthetic linings which can encourage excessive sweating. Children are usually very keen to have a particular brand name. Trainers could be worn in school in place of plimsolls.

Stilettos

Children should not wear stiletto shoes. Apart from the obvious damage they may do to a developing foot, they also alter the way a child walks and their general posture, and may cause lasting damage. There is evidence that children as young as eight years of age are wearing high-heeled, pointed stilettos.

Platforms

The same applies as for stiletto shoes – they alter walking style and posture – but with the added risk of falls and ankle injuries.

Flat shoes

Many children are wearing very flat slip-on 'dolly shoes' that can cause stress to the structures on the sole of the foot and back of leg resulting in pain and inflammation. They also tend to have very thin soles and give little protection from injury. Many slip-on shoes are deliberately worn approximately two sizes too small in order that they do not fall off.

BEWARE CAUTION GOOD

Fashion shoes

There should be an element of common sense where fashion shoes are concerned particularly with older children. They can be worn for short periods for special occasions but are potentially damaging to the foot and general posture as they are rarely accurately measured, they tend to be pointed and have a narrow high heel. They are often made of synthetic materials with a thin sole offering little protection.

Baby walkers

Children will walk independently in their own time and when nature intended. Baby walkers encourage joints to take load earlier than intended and the foot and lower limb to move in an unnatural walking pattern. Research has shown the use of baby walkers is associated with a delay in normal walking and activities such as standing and crawling. Their use is best avoided. Baby walkers are banned in Canada.

Image kindly supplied by Clarks shoes

The Ideal Shoe

The ideal shoe is very difficult to find and is often a matter of compromise, particularly with older children who are under the influence of fashion and peer group pressure. Footwear which is too large, too small, or does not fit properly, can cause life-long foot problems. These problems can easily be avoided by taking care with the type of shoe purchased and considering a few main points. These are:

Adequate length and width

All children's footwear should be measured for length and width and fitted by an appropriately trained shoe fitter. If fitting is not available, or is refused, go elsewhere.

Poorly-fitting footwear in young children could result in deformity, whereas in older children it may result in toenail and skin problems. The Children's Foot Health Register is a register of retailers who guarantee to be 'centres of excellence for children's shoe fitting' and 'provide comprehensive training for staff and offer children's shoes in whole and half sizes and in up to 4 width fittings'.

See the website at: www.shoe-shop.org.uk

Heel stiffener

This is the part of the shoe at the back and sides of the heel. It stiffens the back of the shoe and stops the heel slipping out of the shoe. Along with a broad base of heel, it helps to prevent sprained ankles. It also helps to prevent claw toes, as a shoe which slips at the back will cause the toes to claw to keep the foot in the shoe.

Height of heel

This can be increased as the child gets older but should be no more than 1.5 inches (4 cm).

Broad base of heel

This should be as wide as the heel to give stability, and be made of a shock-absorbing material.

Retaining medium

This is the term used to describe how the shoe is kept on the foot. Ideally it should be by laces, Velcro or 'T' bar, which acts like a seatbelt in a car, holding the shoe onto the foot. This helps to prevent toe deformities, as a poor retaining medium can allow the foot to slide up and down in the shoe and damage the toes or cause the toes to claw to help keep the shoe on. This is a particular problem with the current fashion of not tying shoelaces.

Upper Material

Ideally this should be made of leather and have a Gore-Tex® liner if they are going to be subjected to prolonged wet conditions. Synthetic materials e.g. plastic, nylon and rubber can cause the foot to sweat excessively and increase the likelihood of athlete's foot, verrucae and in-growing toenails.

Toe area shape

This should be foot shaped and not pointed. Pointed toe areas may result in the formation of bunions.

Adequate depth of toe area

This is particularly important in individuals with a big toe that curls up at the end and helps to avoid toenail problems.

Soling Material

This should be of a slip-resistant, shock-absorbing material.

Image kindly supplied by ECCO shoes

Problems associated with growth

Image kindly supplied by Clarks shoes

Image kindly supplied by Clarks shoes

The main difference and characteristic of a child's foot compared with that of an adult is that it grows. This means that the child can be at risk from certain foot and lower limb problems at different ages as the feet and lower limbs develop.

These problems are classed as:

- Causes within the foot (intrinsic)
- Causes outside the foot (extrinsic)

Causes within the foot relate to the posture of the foot as it develops and this can make the foot appear flat-footed. These conditions require expert examination and advice, and professional help should always be sought from your podiatrist if there are any concerns. The first indicator may be unusual wear on the shoe (see page 5).

The main cause outside the foot is ill-fitting footwear with the possibility of causing deformity. Also, as the foot and lower limb grow, they undergo various positional changes that may look like serious problems to the untrained eye, but may be just a matter of developmental change. These can include bow leg, knock knee, and toes pointing inwards or outwards. Some problems associated with growth are first indicated by pain in the foot, swelling, limping or a change in behaviour. A podiatrist or health professional should always see these. They can occur at any time during the growing years but each condition tends to occur within certain age bands.

It should be remembered that no two children are alike, even in the same family.

If parents are concerned – for whatever reason – they should always seek professional advice, as it is better for the fears to be unfounded than to discover, often too late, that treatment was required.

Problems associated with activities

This relates mainly to the very active child and the early secondary school years. Many very young children will attend playgroups and nursery where they will have a more formal exercise routine and may also take part in climbing. They rarely approach podiatrists with problems associated with exercise, but may be referred to a podiatrist due to concern about the way a child walks or unusual wear marks on shoes, such as on the inside or outside of the heel.

During the primary school years they will become more active: dance, gymnastics classes and occasionally martial arts classes are undertaken. Once again, there may be problems associated with injury but overuse begins to become a feature. Foot arch pain is not uncommon, particularly in children who have very low arches or are double jointed. They may awaken their parents during the night with distressing pains in their legs and feet. Often no organic cause is found for this problem but children with a postural foot problem often improve when treated with foot orthoses (insoles). The incidence and severity of pain is usually associated with the level of activity. If no improvement takes place in the short term, it is always advisable to investigate the problem further.

In late primary school and secondary school, growth begins to accelerate and the child reaches puberty. At the same time, sporting and athletic activities tend to increase and become more formalised. The child will also be more active during the school day and may travel further to school. There may also be activities in the evening for a particular interest or talent. This can result in foot and lower limb problems associated with excessive unaccustomed exercise. Growth, possible weight gain and increased exercise contrive to cause a wide range of painful foot and lower limb problems that may be sports related. These complaints should always be taken seriously and a diagnosis made. Failure to recognise and treat these overuse problems can lead to long-term problems for the child and an inability to reach their true sporting potential. Most problems are readily managed by your podiatrist, utilising a variety of methods. But the treatment may also require periods of rest and a change to everyday footwear and activity footwear. Often the problem is easily solved with footwear advice alone. Always remember to wear the correct footwear for the individual sport. You wouldn't play squash in stiletto heels or tennis in football boots. Equally, different types of trainers are required for different sports.

Bare footed activities, e.g. karate, judo, while good exercise for the foot can result in injury but also cause problems due to the foot having a relatively lower heel from what it is used to during the day as shoes are not being worn. This puts added strain on the arch of the foot and back of the lower leg. Careful training and preparation are essential.

If a child indulges in any form of activity, injuries will occur and there will be aches and pains from time to time. Children are no different from adults in this respect but they tend to repair more quickly. Also, they will not rest due to an injury and need to be managed and monitored carefully. Very young children may regard the problem as the norm and not complain. All aches and pains in children should be taken seriously and investigated professionally, particularly during periods of active growth.

Skin and nail problems

Children rarely suffer from corns or hard skin problems. However, they are prone to chilblains and various skin problems. This often leads to the popular misconception that the main problems associated with children's feet are athlete's foot, verruca, sweaty feet, smelly feet, in-growing toenails and blisters. These conditions do exist and parents will often seek treatment and/or advice because they are either troublesome or anti-social. These conditions are often given low priority from a health perspective, but they can become particularly troublesome and difficult to manage if inappropriately treated and should always be treated with respect. It is very important that an accurate diagnosis is made before treatment is started.

Ill-fitting and inappropriate footwear is also a very common problem. This is discussed on page 6. An overview of the more common skin problems are explained below:

Athlete's foot

This can be a problem at any age but is particularly prevalent during puberty. A fungus that enjoys a dark, warm and moist environment causes it. Normally the podiatrist would take a sample of dead skin to identify the fungus and then treat it with an appropriate fungicide. These come in cream, powder and spray forms. Athlete's foot affecting the skin can also affect the nails causing them to look discoloured, thickened and crumbly. Therefore it should not be ignored. Good foot hygiene and the treatment of sweaty feet is also essential. Synthetic shoes and socks should be discarded.

Verrucae

Current thinking suggests that verrucae are left alone to resolve in their own time if they are not particularly troublesome. Many are treated effectively by the simple measure of keeping them covered with a piece of tape which limits their spread. More radical treatment employs the use of caustics, cryosurgery and electrosurgery.

Sweaty feet and smelly feet

Sweaty feet are common in children, but it can be excessive. Care should be taken to change socks regularly. Avoid synthetic materials in shoes and hosiery, and be diligent with foot hygiene. Special insoles are available from the chemist particularly for smelly feet.

In-growing toenails

These can be very painful and distressing and require professional podiatry treatment.

Blisters

These are common with sweaty feet and back-to-school new shoes. If the skin is broken, an appropriate antiseptic protective dressing should be applied.

How can you help?

What parents can do

Always ensure that your child has their feet measured by a trained shoe fitter when you purchase their shoes. The Children's Foot Health Register provides a booklet with details on retail outlets that 'guarantee to provide comprehensive training for staff and offer children's shoes in whole and half sizes and in up to four width fittings'. Use the advice card attached to this booklet when you purchase shoes. If necessary, where there is conflict regarding style and fashion, compromise. Some sensible features in a shoe are better than none at all if children refuse to wear 'old fashioned shoes'. Speak with other parents regarding their footwear buying experiences and compile your own list of reputable and responsible retailers.

Check their feet regularly and ask your podiatrist for advice if any foot problems occur. Don't rely on your child telling you if they have a problem.

Take an interest in your child's foot health especially if they are involved in activities that may damage the feet.

What teachers can do

Set an example with your own footwear. Discuss foot health and foot issues with the children. The sections on Foot Facts, Footwear, Top tips for children's feet and Buying shoes – A straightforward guide can be utilised as an outline for child foot health lessons. Regard foot health with the same gravity as other health issues. Utilise your local registered podiatrists to provide input to the children. Private practitioners can be found on The Society of Chiropodists and Podiatrists website (www.feetforlife.org), or you can contact your local NHS podiatry unit. Review school guidelines on shoes, particularly plimsolls.

What the child can do

Try to be sensible with the shoes that you wear most often. If you have a problem with your feet, get it seen to right away. Many foot problems are very easily fixed but if they are neglected they can cause life-long problems. Remember that if you have aspirations to a job or activity that requires you to be on your feet all day, good foot health will be very important.

Children can learn about good foot health with the help of Professor Pod, a character found on The Society of Chiropodists and Podiatrist's website (www.feetforlife.org).

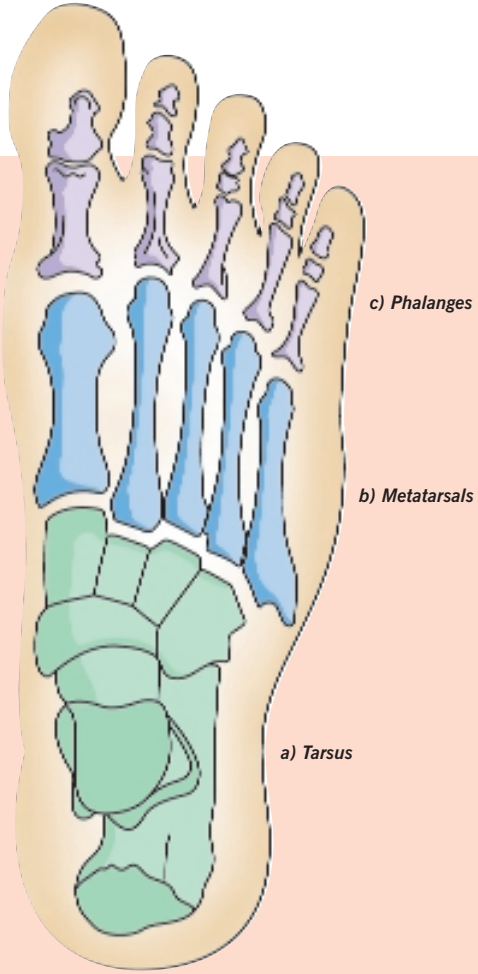
Interesting facts about feet

How much do you know?

Circle the correct answer. The answers with descriptions are on page 18

1. **How many bones are there in each foot?**
   (a) 10 (b) 20 (c) 26 (d) 31
2. **Compared with all of the bones in the body, what approximate percentage of the total do the bones of the feet make up?**
   (a) 5% (b) 10% (c) 25% (d) 32%
3. **How far does the average person walk in a lifetime?**
   (a) 10,000 miles (b) 20,000 miles (c) 115,000 miles (d) 350,000 miles
4. **How many steps does the average adult take in a day?**
   (a) 500-1000 (b) 8,000-10,000 (c) 18,000-20,000 (d) 24,000-26,000
5. **Do children take more steps than adults do in a day?**
   (a) yes (b) no
6. **Approximately how many sweat glands are there in a pair of feet?**
   (a) 10,000 (b) 150,000 (c) 250,000 (d) 1,000,000
7. **How much sweat does a pair of normal feet produce every 24 hours?**
   (a) virtually none (b) a table-spoonful (c) around half a pint (d) around a pint
8. **How long is a size in an English sized pair of shoes?**
   (a) 4mm (b) 8mm (c) 12mm (d) 16mm
9. **When a pair of children's shoes are fitted new, how much bigger should they be than the length of the longest toe?**
   (a) 4mm (b) 9mm (c) 12mm (d) 20mm
10. **What is the largest size of shoes currently being worn?**
    (a) 13 (b) 18 (c) 28.5 (d) 33
11. **What is the average size of a man's foot in the UK?**
    (a)7.5 (b) 9 (c) 10 (d) 10.5
12. **What is the main cause of foot problems?**
    (a) Poor hygiene (b) badly fitting shoes (c) badly fitting socks
    (d) problems that you are born with
13. **In America, what percentage of the population experience foot problems in a lifetime?**
    (a) 10% (b) 25% (c) 50% (d) 75%
14. **What is the combined length of the longest recorded toenails?**
    (a) 0.5m (b) 1.2m (c) 2.2m (d) 3.1m

The Answers



1. There are 26 bones in each foot. The foot is separated into three areas. (a) The tarsus at the back of the foot has seven bones which act as shock absorbers when the heel strikes the ground during walking and then we move our weight forward onto (b) five long bones called metatarsals in the middle of the foot which join up with very small bones called (c) phalanges at the ball of the foot, allowing the toes to bend upward during walking, pushing us forwards into the next step. There are 14 phalanges with three in each of the small toes and two in the big toe.

2. There are 26 bones in each foot making a total of 52. There are 206 bones in the body in total. Therefore the foot contains approximately 25 per cent of the total.

3. This will vary with your occupation and activity but in total is approximately 115,000 miles. That is approximately five times around the world (although some sources suggest a lower number of average miles which works out to three times around the world).

4. This also varies with occupation and activity, but is approximately 8,000 - 10,000 steps. With every step, the heel strikes the ground with a force equal to twice your body weight. That means that if you weigh 10 stones your foot has to cope with 20 stones each step. If you take 10,000 steps per day that is the equivalent of your feet carrying 1,250 tons (1270 metric tonnes) per day. That is equivalent to the weight of 12 blue whales.

5. Yes. Children take shorter and faster steps than an adult and have to cover relatively more ground to keep up.

6. There are approximately 250,000. The number of sweat glands and how active they are vary from person to person; age, disease, hormones and activity can affect them. If the sweat glands are very active, this can lead to very sweaty feet and a condition called hyperidrosis. Reduced activity, often associated with getting older, is called anhidrosis, leading to very dry skin. Smelly feet are termed bromidrosis. The soles of the feet do not contain sebaceous glands (these are the glands that make our skin greasy and keep it supple) and rely on the sweat glands to keep the skin in good condition.

7. This varies for the reasons stated in answer six but is approximately half a pint per day between the two feet.

8. A size in an English sized pair of shoes is approximately one third of an inch, or 8mm. Be aware that different companies use different sizing systems.

9. Normally there should be approximately 12mm between the end of the longest toe and the end of the shoe when the shoe is newly fitted. This allows for growth and elongation of the foot during exercise.

10. The largest shoe size is cited in *The Guinness Book of Records* as belonging to Matthew McGrory in America at size 28.5. He can pay up to $22,745 for a pair of shoes.

11. The average size is 9.

12. This is a contentious issue but is widely regarded as being due to badly fitting shoes. It is also possible that we may inherit a particular type of foot that is at risk if put into a certain type of shoe that another individual will have no trouble with. This may be why many foot problems tend to run in families.

13. In America, 75 per cent of the population is said to experience foot problems in a lifetime. In the UK, previous research has shown that 91 per cent of children have trouble with their footwear and that 89 per cent of older people require some form of foot care.

14. The combined length of the longest recorded toenails according to *The Guinness Book of Records* is 2.2m. There is no comment regarding footwear.

Frequently Asked Questions

Children's Feet

How often do I need to change my child's shoes?

How often you need to change your child's shoes depends on the child and their age. On average, children's feet grow at two sizes per year in the first four years of life and one size per year thereafter until growth is complete. However, a child's foot may not grow for a considerable period of time and then grow several sizes in a relatively short period. To ensure that shoes still fit properly for length and width, a trained shoe fitter should check them every eight weeks. You may do this more frequently if you are aware that they are actively growing in height. In general, the main period of accelerated growth in girls is between eight and 13 years with the peak rate at approximately 12 years of age. In boys this is slightly later between 10.5 and 16 years with the peak rate at approximately 14 years. This corresponds with puberty.

When should I buy my baby her first pair of shoes?

Ideally a child should not require shoes until they are walking competently out of doors. In order for the foot to develop normally and naturally, the child should be barefoot for as long as possible and within the realms of safety to avoid injury. The age at which a child begins to first walk unaided is very variable. On average, for a girl it is 12 months, and for a boy, 15 months, but it may be as early as eight months and as late as 24 months.

What style of shoe is best for a baby who has just started walking?

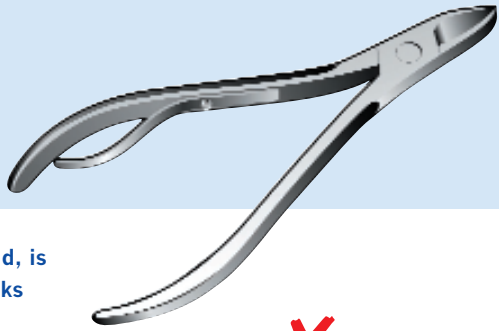
There are varying opinions related to this. Some manufacturers provide very flexible first shoes to allow the foot to be protected outdoors but still function relatively normally (as if they were in their bare feet). Some authorities prefer a rigid shoe to 'support' the foot. This is really only required if the child has a diagnosed problem with their foot function. Boots are not necessary for a 'normal' foot.

My baby has flat feet, is this normal?

Nearly all babies appear to have flat feet when they walk at first. This is partly due to posture and partly associated with deposits of fat which make the foot look flat. When a baby walks, it has to balance a relatively large and unwieldy head on a short torso. In order to do this, it walks with the knees bent, legs wide apart and the feet turned outwards. Also, the nervous control of gait is still being learned and all of these factors combine to give a flat-footed appearance.

Should I buy a baby-walker?

No. A baby-walker encourages loading of joints before nature intended, and unusual and abnormal walking patterns. Nature will decide when a child is ready to walk. Research has shown that they may cause a child to walk later than he/she would normally.

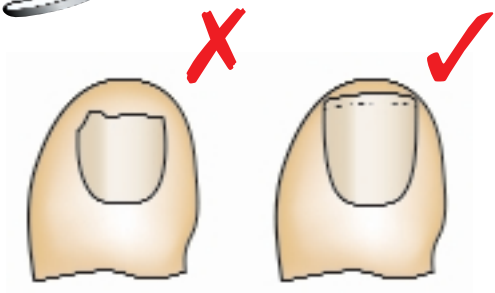


My child's feet always seem to be cold, is this normal? Should I put him in socks and slippers?

This should not be an issue with older children but care should be taken to insulate the feet in babies with socks or bootees as they have a high surface area to volume ratio and lose heat very readily. Children enjoy being in their bare feet but if the feet are noticeably cold or they complain of this, some form of protection is necessary. Socks alone may be dangerous due to slipping. Slippers should only be worn as a short-term measure as they are not held properly on the foot and the foot may slop around inside them, leading to toe deformities in the future. Also, slippers do not come in half sizes and fittings and are generally bought off the shelf. A good pair of insulating socks and a trainer fitted by a shoe fitter is best if not wearing outdoor shoes.

How tightly should I pull the socks on my child's feet before I put on their shoes?

Just like shoes, socks should be the correct size for the foot. They should be just larger than the size of the foot and not cram the toes or stretch over them. If you know the shoe size it should be possible to buy socks the same size but beware as the shoe manufacturer and sock manufacturer may use different sizing systems. Check the socks against the feet regularly, particularly with children who are dressing themselves, as tumble drying can result in shrinkage over time.



How often should I cut my child's toenails and how should I cut them?

Many children will bite or pick their toenails particularly if they are too long. The rate of nail growth is variable from one child to another but the length should be checked weekly. Nails that are too long may be prone to splitting and hence in-growing. Cut toenails using proper nail clippers, which can be purchased from your local chemist. These are much safer and more accurate to use than scissors. Follow the shape of the nail at the end of the toe, cutting the nail so that the corners of the nail are free of the fleshy nail groove. Children's nails are very fine and it is rarely necessary to file them after cutting. Leave approximately 1mm of growing nail.

How can I check that my child's shoes fit properly?

This is best done by the shop where the shoes were bought, ideally by a trained shoe fitter who will also measure the feet. Some retailers will keep

a note of the foot size and fitting or provide you with your own record card. An easy way to check the length yourself is to cut a strip of paper that is the same length as the inside of the shoe. Place this against the skirting board and get the child to stand on it. Measure the distance between the longest toe and the end of the piece of paper. A newly fitted shoe will be approximately 12 – 16 mm longer than the longest toe to allow for growth and the foot elongating when walking. Shoes that are only 5mm longer should be regarded as too short and replaced.

What shoes should I put my child in during the summer?

Ideally these are shoes that are well ventilated and of a natural material (leather). For younger children, 'T' bar sandals. Most children now wear trainers that are ideal if fitted properly by a trained shoe fitter. However, many are bought off the shelf and not only fit badly but are made from synthetic materials and cram the toes.

Should my child wear the same shoes everyday?

Not everyone is able to afford several pairs of everyday shoes for their child. Ideally, different shoes should be worn on alternate days to allow the shoe to dry out, as children's feet can be particularly sweaty. Wearing damp shoes all the time can make the child more prone to athlete's foot and verrucae.

Are plimsolls advisable?

Plimsolls are ideal for the purpose for which they were designed – as a flexible gym shoe worn for short periods.

However, they should not be worn for long periods every day (as is the practice in many primary schools) and left in shoe bags overnight where the sweat from the previous day does not dry out. They do not come in half sizes and width fittings and it is rare to hear of any that are fitted by a trained shoe fitter. The soling material tends to encourage the foot to sweat and makes it more prone to athlete's foot and verrucae infections. Very young children (primary 5) are often encouraged to wear slip-on plimsolls, as they cannot tie their laces. This may result in toe deformities.

Shoe shops rarely seem to fit Wellington boots, canvas shoes and slippers, how can I make sure that this type of footwear fits properly?

Fit in a shoe relates to length and width (see above, how can I check that my child's shoes fit properly?). If the purchase is found to be too small it can be exchanged. Feeling the broadest part of the foot (across the balls of the foot) can check the width against the upper of the shoe. They should be approximately the same width.

Are width fittings really important?

Shoes that are too wide or too narrow can do as much damage to a growing foot as shoes that are too short or too long.

Can a young child tell if her shoes hurt?

This is difficult to answer as children tend to adapt to what they regard as normal and accept it. Peer group pressure and the dictates of fashion may also stop a child complaining. This is why skilled shoe fitting and regular checks are so important, particularly with very young children.

My child seems to have knock-knees, is there anything I need to do?

Knock-knee is a normal developmental variant between the ages of approximately three and seven years. Little can be done to influence this and unless it is excessive or the degree of knock-knee is different on both legs, nature should be allowed to take its course. Often the feet will accommodate the unusual posture of the foot by rolling inwards and it is best to provide a firm, well fitting shoe during this period to reduce the likelihood of this becoming excessive.

What socks are best?

Firstly the sock should fit and be the same size as the shoe. One hundred per cent cotton is best, particularly if the child has skin problems. Most cotton socks contain a small percentage of nylon. A 50 per cent wool/50 per cent mix is also very good. Avoid 100 per cent nylon socks as they will make the foot sweat and do not absorb moisture. Some modern walking socks have a wicking effect and when used with footwear with a Gore-Tex® lining, keep the foot dry. They are usually made from modern synthetic fibres but can be expensive.

Do I need to buy my children's shoes from a specialist shoemaker?

Not necessarily, but ensure that they have trained staff. The Children's Foot Health Register is a register of retailers who guarantee to be 'centres of excellence for children's shoe fitting' and 'provide comprehensive training for staff and offer children's shoes in whole and half sizes and in up to four width fittings.' (Children's Foot Health Register, PO Box123, Banbury, Oxon OX156WB. Tel. 01295 738726. Website: www.shoe-shop.org.uk). There are many excellent independent retailers. Some high street chains offer the use of DIY measuring boards or they may have a trained person on the premises.

My child always wears trainers. Is this unhealthy for their feet?

No, as long as good foot health is practised, the feet are measured for the shoes and they have sensible features. i.e. adequate room, depth and width in the toe area, foot shaped in the toe area, laces or Velcro fastening, well fitting and firm at the heel, leather uppers, shock absorbing heel and sole.

Do trainers need to be fitted?

Fitted trainers are best but not always possible. Remember that many trainers are designed for particular sporting activities and may not be suitable for regular every day wear. Children often pick trainers due to peer group pressure and fashion trends to wear the right label or style.

My teenager insists on wearing high-heeled, pointed shoes, and I am worried about the long-term damage this will do to her feet.

Children as young as eight years of age have been noted wearing this type of footwear. You are right to be concerned regarding the long-term effects this will have and the practice should be discouraged and reserved for occasional use. The long-term effects are not only to the feet but also to the posture in general with the possibility of future knee, hip and back problems. In the short term, the feet will also be damaged with restricted movement at the ankle joint, hard skin on the soles of the feet and tops of the toes and increased risk of in-growing toe nails.

Are there any warning signs I should look for when I check my child's feet?

Yes. These can be broken down into four main areas. These are skin, nails, deformities and posture.

Skin – look for areas of redness and rashes particularly between the toes, in the arches and below the ankle bones indicating athlete's foot, particularly if they are itchy. Look for red marks and/or blisters at the back of the heel and on the tops of the small joints of the toes indicating ill-fitting shoes. Raised and painful hard masses on the soles of the feet may indicate a verruca.

Nails – any inflammation around the nails should be taken seriously as it may indicate infection. Any discolouration of the toenails should be checked by your podiatrist.

Deformities – Toes should always be straight in line with the foot and not drawn back or curled. The fifth toe may tuck under the fourth slightly and the fourth under the third toe but the big toe should also be straight.

Posture – If the feet appear to be excessively turned in or out or the arch looks very flat, particularly if the child complains of pain, the advice of your registered podiatrist should be sought.

Do I need to get my child's feet measured every time I buy shoes?

Yes. It is impossible to know the size of your child's foot otherwise, as growth can be erratic.

Useful contacts

The Society of Chiropodists and Podiatrists
1 Fellmongers Path
Tower Bridge Road
London
SE1 3LY
Tel: 0845 450 3720
Fax: 0845 450 3721
Email: enq@scpod.org
www.feetforlife.org

Children's Foot Health Register
PO Box 123
Banbury
Oxon
OX15 6WB
Tel: 01295 738726
Fax: 01295 738275
Email: cfhr@netcomuk.co.uk
www.shoe-shop.org.uk

Websites

www.clarks.co.uk
www.ecco.com
www.elefanten.de
www.newbalance.co.uk
www.startriteshoes.com

Maintaining and caring

for a child's feet will benefit their health, mobility and well-being throughout their entire lives.

The Society of Chiropodists
and Podiatrists

1 Fellmongers Path, Tower Bridge Road, London SE1 3LY
Tel: 0845 450 3720 Fax: 0845 450 3721 Email: enq@scpod.org
www.feetforlife.org

Written by Gordon Watt, Lecturer in podopaediatrics, Glasgow Caledonian University and Consultant Podiatrist, Royal Hospital for Sick Children, Glasgow
Illustrations by Arthur Phillips 020 8398 0077
Design and print by Harvest Digital Imaging Ltd 020 7515 4242