

THE
 **LONDON**
PODIATRY
CENTRE



CHILDREN'S FOOTWEAR GUIDE

In association with

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CHILDREN'S FOOTWEAR GUIDE

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● INTRODUCTION



The London Podiatry Centre (LPC) was founded in 1991 and is one of the most advanced private podiatric treatment centres in the world. The Centre provides a comprehensive range of foot treatments, musculoskeletal imaging, surgery and physiotherapy services for children and adults in Lewisham and at Harley Street. Its practitioners have more than 80 years of combined experience and have gained the trust and confidence of elite institutions including The England national football team and Arsenal Football Club for whom the LPC consults.

Podiatric biomechanics involves the structure, alignment and function of the lower limb and feet. The London Podiatry Centre uses advanced assessment, imaging and clinical skills to diagnose conditions or injuries that affect the lower limb. The LPC also provides video, pressure and 3-dimensional computerised gait analysis, which is usually only available in medical research facilities and universities, to provide objective information about a patient's individual gait pattern.

Parents often ask whether or not their child is walking 'normally' and if their child's foot posture is 'normal'. In the vast majority of cases where there is concern about a child's gait or foot posture, their gait pattern and foot posture will be within normal development with no reason for concern. However, on occasion gait and developmental abnormalities are encountered which fall outside of what would be considered 'typical' and may also depend on the child's age, medical history, and family history. On some occasions, specialist examination and gait assessment is essential to identify and diagnose gait dysfunction to ensure treatment is delivered early if required.



The London Podiatry Centre prescribes foot orthoses and offers comprehensive advice on footwear and rehabilitation which may be essential to help treat an injury or to enhance and improve general lower limb and foot health in adults and children.

“The London Podiatry Centre uses advanced assessment, imaging and clinical skills to diagnose conditions or injuries that affect the lower limb”

● EARLY DEVELOPMENT

When your child reaches the milestone of walking it is a very happy moment in their development and quite an achievement! However, a child is not a smaller version of an adult as the morphology (shape) and structure of their bones and soft tissues need time to develop and grow. You may have the expectation that your child will walk like an adult after a few months, however it takes years and lots of practice for a mature walking pattern to develop in a child.

The main factors essential for children when learning to walk and achieve a 'typical' gait pattern are co-ordination, an ability to learn, and a 'normal' neurological and musculoskeletal system.

The components of typical gait in young children will vary and are very different to that of an adult.

However, the majority of changes which include musculoskeletal growth, neurological development and most minor and gross motor skills are achieved by the age of seven in most children, when there are no underlying factors that may impair the development of efficient gait.

“When your child reaches the milestone of walking it is a very happy moment in their development”



PRE WALKING:

The following is a summary of 'typical' gait development to the onset of independent walking. Typically, the milestones prior to walking occur in stages and include:

- Learning to sit up unassisted (6-8 months)
- Crawling on hands and knees (9-11 months)
- Bottom shuffling (11-12 months)
- Furniture walking (11-13 months)
- Independent walking (12-14 months) (Staheli and Song, 2012; Johnson et al, 2014)

Each child is an individual, so some children may not go through all of these stages nor in this order. However, they are important milestones for building strong muscles, bones and co-ordination in preparation for the onset of walking. Typically, children start independently walking between 12-14 months (Staheli and Song, 2012).

“It takes years and lots of practice for a mature walking pattern to develop in a child”

● THE ONSET OF WALKING (12-14 MONTHS)

When children have just started learning to walk their arms are held up high to aid with balance; they walk really fast and may trip or fall down. They rely on a wide base of support to maintain their stability and may appear bow legged because of this. They often put their feet down flat on the ground in full contact and they do not spend as much time on each leg when clearing their feet for the next step. Their foot position appears very flat and flexible and this is because of the presence of a fat pad on the bottom of the foot and the position of the heel bone. Some children may not walk independently until the age of 18 months.

However, walking delay beyond 18 months needs investigation. The time when you should consider buying your child's first shoes is when they start to walk assisted and definitely by the time they are independently walking and ready to walk outdoors.

There is little high-quality research in very young children in relation to footwear. However, a systematic review published in 2011 updated the literature on the effects of shoes on all aspects of children's gait, where they looked at the biomechanical differences between barefoot and children wearing shoes (Wegner et al, 2011). They found from their

meta-analysis that shoes affect the gait in children and that children in shoes walk faster by taking longer steps and they have greater knee and ankle motion. Shoes were shown to reduce foot motion and increase support during the stance (foot flat on the ground) phases of gait. During running, they found that shoes were able to attenuate shock and encourage a rear foot strike pattern. This is all valuable existing information about how shoes impact on a child's gait but the long term effect of these factors in relation to a child's growth and development are currently unknown. While shoes are part of your child's wardrobe and you want them to be aesthetically

acceptable, the main important factors of shoes for very young children is to protect the foot from injury and infection and to enable walking (Staheli and Song, 2012). Well-fitting shoes are an essential part of aiding the optimum environment for adequate function and to prevent any potential foot problems. Very stiff, unusually shaped and compressive footwear may cause deformity, weakness, and a loss of mobility and function. As children get older, the role of footwear will change in relation to their age and for what activity or situation (i.e. school shoes / sports shoes) the footwear is required.



● ANATOMY OF THE SHOE

The 'anatomy' of shoes is made up of the components which can be grouped into those that make up the upper and the sole of the shoe.

THE STRAP AND LACES:

These components make up the strap and laces that holds the shoe on the foot. When using laces having more than four reinforced eyelets is important to pull the sides of the shoes closed. This helps to stabilise the shoe on the foot.

THE UPPER:

These pieces make up the top half of the shoe known as the upper. Leather usually is the best material for the uppers of kids' shoes. It's flexible, with light stability and is soft but still hard-wearing. As it is a natural material, it also lets air in but keeps moisture out. This helps your children's feet stay cool and dry in most conditions.

Nubuck and suede are increasingly found on modern children's designs and are different types of leather and share most of its benefits. Avoid shoes with uppers made of other materials (synthetics or plastics) as these are often hard, inflexible and won't allow your child's feet to breathe and may impede movement and natural function.

INSIDE THE SHOE:

The inside of a shoe is just as important as the outside. The lining should be breathable which transfers moisture away from the foot. Try to avoid shoes that have inner seams as these can rub and cause skin irritation.

THE SOLE:

Rubber and polyurethane are the best materials for the soles of kids' shoes as they provide flexibility and are hard-wearing. This is important to withstand the punishment most kids put their shoes through! These materials can also be moulded to create sole patterns that provide great grip and design features that appeal to children. Try to avoid shoes with soles made of resin or leather as they don't grip very well and can cause slips and trips.

In any situation, the main features of a good pediatric shoe are:

- A firm heel cup (the area of the shoes where the heel sits)
- Slight heel elevation (no more than 3-4mm) at heel
- Good flexibility of the forefoot (you should be able to bend this easily with your fingers)
- Some mild stiffness of the mid-part (upper) of the shoe
- Adequate fastenings that can be adjusted (double Velcro, laces or strap)
- Reasonable height of heel counter or a boot (in the case of a flatter foot type, a higher heel cup will offer better support)
- Friction on the sole, ensure the shoes providesufficient grip on the ground to avoid slipping



SIZING AND FITTING:

Wearing shoes of insufficient length during childhood is often cited as leading to foot deformities, particularly the development of hallux valgus (bunions). Klein et al (2009) reported a significant relationship between a larger hallux valgus angle and pre-school children who were wearing footwear too short in length. This is just one example as to why assessing shoe size and fit is very important in the developing foot. Other reasons to check size is to prevent other problems like lesser toe and nail disorders, blistering or formation of hard skin due to the shoes being too tight or too loose.

SIZING:

When considering size, it is important not just to consider the length of the shoe but also the width, depth and shape of the shoe. Don't get fixated on a size or number because you may have three pairs of shoes that are all the same size, however they will all fit your child's foot differently because of the style, shape or brand.

The general rules for sizing are:

LENGTH: Children's shoes need a small gap on the end of the shoe measured for the longest toe to allow for growth and movement.

WIDTH: Correct width should allow the toes to rest flat on the inner sole of the shoe without begin compressed.

DEPTH: Correct depth is important to prevent pressure being exerted on the tops of the toes.

FOLLOW THESE RULES FOR FITTING

01

Fasten the shoes on to the foot, if your child uses foot orthoses them make sure you put these into the shoes at the fitting stage.

02

When sitting, grip the heel of the shoe and pull down gently, the heel should not move when you pull down. If it does the shoe could be too big.

03

On standing, feel around the top of the shoe and check there are no gaps.

04

Feel the end of the shoe and ensure there is a small gap between the end of the longest toe and the end of the shoe ensuring the toes are not rubbing on the end of the shoes.

05

Feel along the side of the shoes. There should be no bulging or pressure at the sides and the widest part of the shoe should correspond to the widest part of the foot.

06

Rub your thumb on the top of the shoes, there should be a shallow ripple effect. If there is not, the shoe is too narrow/tight. If you can pinch the material into a ridge, the shoe is too wide.

07

When walking, your child should feel comfortable and the shoes should not slip off the feet or be loose. Please remember that a shoe should never be 'worn in'.



Q&A SECTION

Q. At what age should a child first get fitted for shoes?

A. You should consider buying your child's first pair of shoes when they start to walk assisted and definitely by the time they are independently walking and ready to walk outdoors. It is best for your child to not wear shoes as they learn to walk, allowing for the muscles and bones of the foot to develop and strengthen naturally. As soon as they have taken their first independent fifteen steps, your child will be curious to explore new parts of the home and shoes are required to both support the foot as well as protect it against foreign objects.

Q. How quickly do children's feet grow?

A. On average, a child's foot will grow around 25mm (the equivalent of three whole British shoe sizes) in its first year, 16mm per year between the ages of 1-5, and then around 8mm every year until they reach their mid-teens.

Q. How often should your child be fitted for shoes?

A. In line with the quick growth of the foot, your child's shoe size should be monitored every 6-8 weeks between the time of its first shoe and the age of two. Between the ages of 2-5 you should check your child's shoe size every 3-4 months, and after the age of five your child's shoe size should be checked every 4-5 months. Growth can however take place in sudden spurts so regular checks are crucial and you should measure your child's feet closely before purchasing any new shoes.

Q. How do I tell when my child's shoes need replacing?

A. It is important to check that there is sufficient space in the toe for the foot to breathe and grow. If there is no room either at the toe nor at the wide points of the shoe, this can affect the growth of the foot and indicates that your child's shoes will need replacing. At this point you should re-measure your child's feet to evaluate the growth in the feet as well as the next size required.

Q. My child's feet are different sizes; how should I size them?

A. It is quite natural for a child's feet to be different sizes. It is important that you size your child's feet in relation to the bigger foot, thus giving both feet the breathability and space to develop naturally.

Q. How long should a pair of children's shoes last?

A. A pair of children's shoes last different lengths of time depending on your child's age and consequently the rate of foot growth. A younger child, aged between 1-3 years, will require between 2-3 pairs of shoes per year to cope with the rapid foot growth of that age group. Children aged between 3-10 years will need 1-2 pairs of shoes each year since the growth in the foot will have slowed as they get older.

Q. What is width fitting and how do I measure it?

A. In addition to length, width is an important measurement for children's feet. In the UK, a standard width fitting system is provided for Clarks and Startrite shoes. Widths range from a D to a H, where D is the narrowest width and H the widest. The industry average width, an F, fits approximately 80% of children.



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CHILDREN'S COLLECTIONS

AllSole is a luxury online footwear destination passionate about shoes. Taking inspiration from the people who wear our shoes and the cultures they belong to, we are proud to curate a collection that both champions the craft of shoemaking while remaining distinctly on-trend.





Founded in 2000 by Italian creatives Leonello Calvani and Patrick Ithier, Ash is an independent brand that has risen to fame thanks to its fusion of luxury glamour and metropolitan style.

The new Ash children's shoes collection showcases the same spirit of rebellion in silhouettes familiar from the brand's adult offering, including high-top and wedges styles with metallic details.



asics
TIGER

Today a world leader in performance footwear and a popular brand among street style influencers, Asics' origins go back to 1949 when Kihachiro Onitsuka was quietly enjoying an octopus salad in his favourite Japanese restaurant. Mr. Onitsuka became fixated on the way an octopus's tentacles managed to grip their way around the seabed, a concept that inspired him to produce a revolution in basketball trainers.

Reaching back into its illustrious archives, the new Asics collection of children's footwear includes some of the brand's most famous models - including the Gel-Lyte III & V - all in miniature form. Built for comfort and performance, every pair of Asics is marked with the brand's signature Tiger Stripes.

CONVERSE

The Converse star may be instantly recognisable across the world today, but the brand started out with humble origins as a manufacturer of basketball sneakers over 100 years ago. Evolutions in technology and design saw the brand continue to evolve, moving away from basketball to become a firm favourite among sports legends, rock stars and celebrity figures.

Converse is today an essential style in every man and woman's wardrobe, and the Converse children's collection at AllSole comprises varying designs of the brand's timeless All Star low-top and high-top styles for boys and girls.



Dating back to the end of the Second World War, Dr. Martens was born out of the unlikely marriage of a German inventor and an English family from Northamptonshire. A robust construction comprising soft leather uppers and soles originally made from tyre rubber saw Dr. Martens' boots rise to become the worker's boot. Dr. Martens was later inherited by English subculture groups who transformed the brand to give it its iconic status as a symbol of rebellion and revolution.

The Dr. Martens boot silhouette has remained unchanged for decades, and its signature look is retained for the brand's latest children's collection. Originally designed for comfort and durability by a German doctor, Dr. Martens' leather construction and air-cushioned sole makes them a perfect fit for children.

HUNTER

One of Britain's most quintessential footwear names, Hunter traces its origins back over 150 years and served British feet through two World Wars. The brand has since become the number one label for wellies across the world, seeing celebrities including Kate Moss and Princess Kate through festivals, country family walks and the wet British winter.

AllSole's children's Hunter wellies collection includes the brand's most iconic silhouettes crafted for little feet, including the new 'Hunter Firsts' collection which introduces toddlers to the world of wellies. All hallmarked with Hunter's signature red and white logo, our collection also includes styles with gloss and glitter finishes for glamorous little girls.



mini melissa

Established by a pair of Brazilian brothers in the early '70s, Melissa is an eco-friendly footwear brand famous for the unique material it developed for all its styles of shoes. Melfex is a sustainable, recyclable and durable rubber-like material infused with a sweet scent that moulds to the shape of the foot to provide great comfort in your shoe. Its revolutionary material has drawn admirers throughout the fashion world, and since its inception the brand has collaborated with leading figures including Vivienne Westwood, Karl Lagerfeld and Zaha Hadid to create exciting new shoe designs.

The Mini Melissa collection at AllSole comprises the brand's most popular styles, with several including playful motifs from children's pop culture such as Alice in Wonderland and Walt Disney. The collection also features sought-after Vivienne Westwood For Mini Melissa styles which offer a slice of Dame Westwood's punk edge.



Timberland produces boots built for taking on the great outdoors. Born in Massachusetts in 1973, the brand specialised and continues to specialise in crafting robust working boots. Today the brand's shoes are instantly recognisable around the world, with a shoe range that covers lifestyles that include great outdoor expedition, days on the beach and everything in between.

The carefully selected children's Timberland collection at Allsole offers some of the brand's most popular styles designed for little feet. All produced with the same meticulous attention that make its adult forefathers such a durable product, this is the brand your child needs to get through winter with warm, comfortable feet.



TOMS

Renowned for its distinctive take on Argentinian alpargata shoes, TOMS is the brainchild of founder Blake Mycoskie. When travelling through Argentina, Blake was saddened by the sight of impoverished children walking the streets barefoot; in an attempt to combat this issue, Blake founded a footwear company that promised to give one pair of shoes to a child in need for every shoe sold, One For One™. Ten years later, over 60 million shoes have been offered for free to people in need.

Specialising in slip-on shoes, the TOMS footwear collection includes signature low-top styles for all age groups including Velcro-secured shoes for toddlers.

UGG®

UGG was born when Brian Smith ventured onto the beaches of Southern California selling sheepskin boots from his native Australia. Forty years later and UGG is today an international leader in the footwear world, specialising in sheepskin-lined boots but with an expansive range of footwear that cover all seasons.

The UGG collection at AllSole includes the brand's signature sheepskin-lined suede boots alongside new styles of Chelsea boots and soft booties for babies. With a range that covers all ages, we are sure we have the perfect UGG style for your little one.



VANS®

Initially established in 1966, Vans rose to fame in the 1970s as the chosen shoe among California's skateboarders. Worn and designed by the most prestigious skateboarders of the era, Vans was soon exported around the world where the brand's shoes were welcomed for their blend of comfort, durability and a distinct rebellious edge.

Today Vans is a household name in the footwear world and a go-to style for everyone from athletes and celebrities to musicians and movie stars. The Vans collection at AllSole comprises the brands renowned Old Skool and Sk8 Hi models as well as Velcro and zip-on styles for toddlers.

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