



# Baby's Growing Feet

A Pediatric Guide for Parents



caring about first steps™



**Do you know what's  
best for your baby's  
growing feet?**

*You count each precious toe,  
wiggle each tiny piggy, kiss  
each chubby sole.*

*But you may not think about  
the fact that your baby's  
soft, adorable feet will  
eventually carry him or her  
over thousands of miles in a  
lifetime. To make the journey,  
healthy foot development is  
important from day one.*

# The Critical First Year

In the first year, your child's feet will grow to almost half of their adult size, a lot of change for something so tiny and precious.

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The human foot – one of the most complex parts of the body – is made up of 26 bones that work together with muscles, ligaments, tendons, blood vessels, and nerves to adapt to uneven walking surfaces and provide shock absorption.

But a newborn's foot structure is composed mainly of relatively soft and flexible cartilage which will gradually convert to bone over time – only fully hardening in the child's mid- to late teens.

That's why foot specialists consider a child's first year to be the most important in the development of healthy feet for life. During the first few years of growth, a child's foot is particularly vulnerable to injury or deformity from restrictive or ill-fitting socks or footwear. Many adult foot ailments originate in childhood and often lead to problems in other parts of the body.

## **About this Guide**

This Pediatric Guide shares common foot health recommendations from national pediatric and podiatric medical associations in the United States, Canada, and Europe. It draws on new research from medical centers and biomechanics laboratories around the world. A comprehensive list of these resources is provided on the inside back cover.

All content of this Pediatric Guide was reviewed and approved by an independent US-based podiatrist prior to publication.

# Learning to Walk

When your little one starts to walk, traditional, hard-soled shoes are not recommended. There is increasing evidence that wearing stiff shoes in early childhood may actually be detrimental to the development of a normal foot arch.

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## Feeling the way

Until your child is walking competently outdoors on uneven surfaces, it is best for him or her to feel the floor or ground as much as possible to develop good toe-gripping and muscular strength. Stiff shoes inhibit a baby's growing muscles from strengthening and balancing with the foot and leg. A rigid shoe to "support" the foot is really only required if the child has a diagnosed problem with his or her foot function, so consult your doctor if you have any concerns.



## Protection from surfaces

Learning to walk in bare feet is best for a baby's natural foot development. But often the walking surface is cold, hot, or rough, and sensitive little feet need protection. In these situations, doctors recommend that babies wear soft-soled shoes like Robeez so they're protected and can still feel the ground, flex their feet, and grip with their toes.

# Why Soft Soles Are Best

Medical experts recommend soft-soled shoes for your baby's growing feet – but not just any soft-soled shoe will do.

- Babies' feet sweat more than adults', so doctors recommend natural, breathable materials like leather. Socks are breathable, but they are also very slippery and can be dangerous.
- Choose a stay-on shoe with a thin, slip-resistant sole such as suede. Backless, slide-on shoes are harder to keep on and can cause your already unsteady little one to trip more easily.
- Shoes are not the only things that can restrict your child's healthy foot development. Tight socks, sleepers, and bedclothes can also compress feet and toes. Ensure wiggle room at all times.



# Recommendations from Medical Experts

Doctors and other medical experts around the world agree that soft-soled leather shoes like Robeez are the next best thing to bare feet for your little one's healthy development.

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“The effectiveness of a soft-soled leather shoe is that it does provide protection for the child's foot when walking, and it does allow the normal amount of foot movement and motion to occur. There is no restriction of the normal contraction of the muscles, and the muscles are allowed to work and develop step after step, allowing the child's foot to become stronger and more efficient.

Allowing the muscles to work to their fullest does allow balance and coordination to occur. The more flexible the shoe, the more the foot muscles will work. If a shoe is too stiff or solid, the muscles will be inhibited in their attempt to maintain balance of the child's foot and leg.

Overall, I feel very strongly that a child's foot should have some protection from the ever present danger of foreign bodies at home as well as outdoors. The soft-soled shoe clearly is adequate in providing this type of protection while allowing the foot to have a normal freedom of motion.”



**Dr. Ronald L. Valmassy**  
Podiatrist,  
Center for Sports Medicine  
at St. Francis Memorial  
Hospital, San Francisco,  
California

*Author of Clinical Biomechanics  
of the Lower Extremities*

“I am a Pediatric Orthopedic Surgeon and get asked about infant shoes all the time. I have recommended your shoes to countless parents and friends; I can't say enough good things about your shoes.”

Dr. Donna Pacicca  
Pediatric Orthopedic Surgeon, Missouri

“We recommend Robeez to all of our patients. Not only because of the fun and colorful designs, but also for the comfort and protection they give to our little one's feet. They allow little feet to develop and grow naturally. Best of all, moms love them because they stay on!”

Dr. Russell Shipman  
Pediatrician, Maine

“I am a pediatric chiropractor and a neurodevelopmental therapist. The feet are the foundation to proper development; not only structurally but also necessary for cognitive maturation. Robeez simulate the normal movement promoting health and wellness. In children under four where we can confirm developmental delay, I use them as part of the protocol for therapy.”

Dr. Laura Hanson  
Doctor of Chiropractic, D.I.C.C.P., Georgia

“The flexible sole and excellent fit of Robeez allow the developing foot to learn balance and build strength, without sacrificing protection.”

Richard Bosch  
HKin, CPedTech(C), CPed(C), Ontario



“We recommend  
Robeez to all of  
our patients”

# Frequently Asked Questions

With so much to think about in your baby's first year, you may not know what to ask about healthy foot development. Here we share pediatricians' answers to some of the most common questions they receive.

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## When should I buy my baby's first pair of regular shoes?

Ideally, children should not require more structured shoes until they are walking competently outdoors. In order for the foot to develop normally and naturally, your child should be barefoot or in a soft-soled shoe for as long as possible.

## How often do I need to replace my baby's footwear?

At least every six months. On average, children's feet grow 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. Measure your little one's feet regularly to ensure adequate wiggle room for his or her toes.

## My child's feet always seem to be cold. What should I do?

Babies' feet have a high surface area-to-volume ratio and readily lose heat. Children enjoy being in their bare feet, but if the feet are noticeably cold, some form of protection is necessary. Socks alone may be dangerous due to slipping. Backless slippers should be avoided, as they are not held properly on the foot and the foot may slide around inside them, leading to toe deformities in the future. Breathable, soft-soled leather shoes like Robeez are ideal for keeping on socks or protecting little ones' feet from cold surfaces.

## What shoes should my child wear during the summer?

Ideally, summer shoes should be well ventilated and made from a natural, breathable material like leather, because children's feet can be particularly sweaty. Remember that little feet also need protection from dirty or hot surfaces, such as sand at the beach, and should not always go barefoot in the summer.

## My baby's feet are flat. Is this normal?

Yes: nearly all babies appear to have flat feet when they first walk, partly due to posture and partly associated with little fat pads which make the foot look flat. But if you do suspect a developmental problem with your baby's feet or legs, talk to your doctor and ask if you should be referred to a podiatrist specializing in pediatrics.

## How can I help my child develop stronger foot muscles?

Even before babies begin crawling or walking, they benefit from play time when they can lay on their backs and kick their legs and feet freely. Gently massaging your baby's little feet can also stimulate the muscles and blood flow to help them develop properly. Once children begin to stand and walk, fun games like balancing on tip-toes or picking up light items with their toes will strengthen their little feet. It's important, however, to allow your child to learn to walk at his or her own pace – never rush the process before their feet, legs, and balance are ready.





## Did You Know?

Here are some fascinating foot facts that illustrate why your baby's tiny feet are so important and deserve the proper footwear.

Your feet account for 25% of the total number of bones in your entire body.

In an average lifetime, a person walks approximately 115,000 miles/185,000 km – about five times around the world.

The feet can be one of the most indicative signs of an individual's health. Early symptoms for diabetes, arthritis, and circulatory problems can often show themselves initially in the feet.

With every step, your heel strikes the ground with a force equal to twice your body weight. That means that if you weigh 150 lbs/68 kg, your foot has to cope with 300 lbs/136 kg each step.

In North America, up to 75% of the population is said to experience foot problems in a lifetime. In the UK, research has shown that up to 89% of older people require some form of foot care.

# Resources

This Pediatric Guide shares recommendations from pediatric and podiatric medical associations and draws on new research from around the world. To find out more, visit these websites or refer to the studies cited below.

American Academy of Pediatrics	<a href="http://www.aap.org">www.aap.org</a>
American Podiatric Medical Association	<a href="http://www.apma.org">www.apma.org</a>
National Association of Pediatric Nurse Practitioners	<a href="http://www.napnap.org">www.napnap.org</a>
Foot Health Foundation of America	<a href="http://www.foothealthfdn.org">www.foothealthfdn.org</a>
Children's Medical Center, Dallas, TX	<a href="http://www.childrens.com">www.childrens.com</a>
Canadian Paediatric Society	<a href="http://www.cps.ca">www.cps.ca</a>
The Society of Chiropodists and Podiatrists (UK)	<a href="http://www.feetforlife.org">www.feetforlife.org</a>
Union of National European Paediatric Societies and Associations	<a href="http://www.unepsa.org">www.unepsa.org</a>
British Columbia Association of Podiatrists	<a href="http://www.foothealth.ca">www.foothealth.ca</a>
Footwear Biomechanics Group, International Society of Biomechanics	<a href="http://www.footwearbiomechanics.org">www.footwearbiomechanics.org</a>

## Research

*Footwear's Influence on Young Children's Gait Pattern.* Instituto de Biomecanica de Valencia, Spain. Paper presented at the 7th Symposium on Footwear Biomechanics, Cleveland, OH, July 27-29, 2005.

*Should Children's Shoes Be Scaled Down Versions of Men's Shoes?* Biomechanics Research Laboratory, University of Wollongong, NSW, Australia. Paper presented at the 7th Symposium on Footwear Biomechanics, Cleveland, OH, July 27-29, 2005.

*The Influence of Footwear on the Prevalence of Flat Foot.* V. Sachithanandam and B. Joseph – Kasturba Medical College, Manipal, India. *The Journal of Bone and Joint Surgery*, March 1995, Volume 77-B, Issue 2, pp. 254-7.

*Shoes for Children: A Review.* L.T. Staheli – Department of Orthopedics, Children's Hospital and Medical Center, Seattle; and Department of Orthopaedics, University of Washington, Seattle. *Pediatrics*, August 1991, Volume 88, Issue 2, pp. 371-5.



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