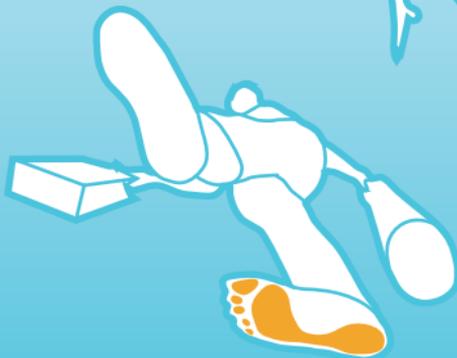


Guide to Foot Health

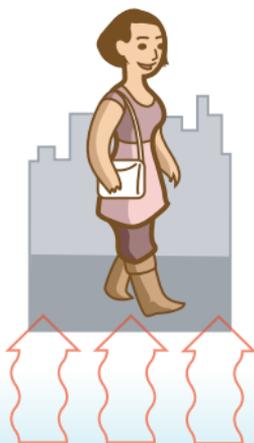


1 person out of 5
needs to consult
a foot specialist.

Short history lesson

In the beginning...

In the beginning, man walked in bare-footed over uneven ground. With the advent of civilisation, man enclosed his feet in shoes and the surfaces on which he walked became increasingly hard: concrete, asphalt, tiled floors, etc. But, hard surfaces don't absorb the shock waves created by walking, and these pass through the entire body.



Did you know ?

>>> There are different sorts of feet.



Greek foot

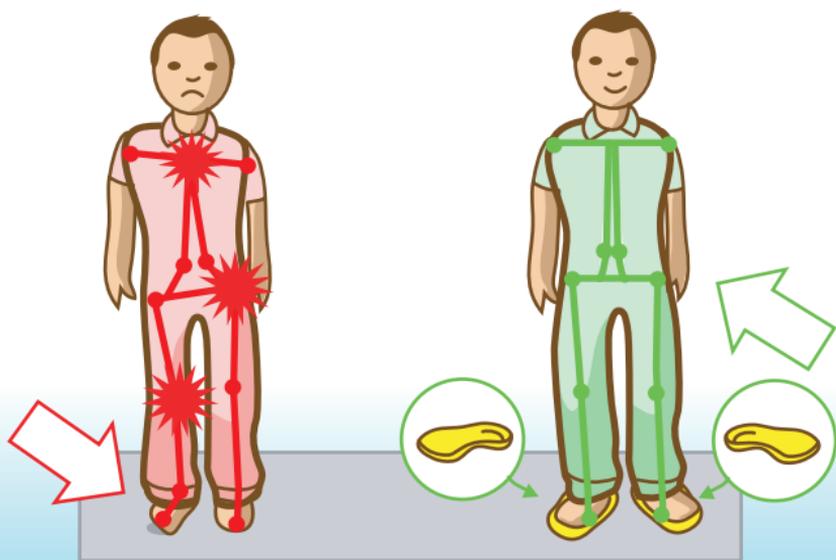


Egyptian foot



Square foot

The foot has a small surface area for adapting to the ground and must support the human body, which has a large surface area: this situation causes instability. The foot is where our body comes into contact with the ground, hence the important role it plays in postural balance. A plantar orthotic contributes to foot stability and therefore to postural alignment.



➔ A good posture has also to do with foot stability !

The foot is...

... unique.

Your foot has its own particular morphology (size, volume and shape). Foot types are commonly known as either normal, high-arched or flat, but there are an infinite number of combinations of size, volume and shape. Each foot leaves an absolutely unique footprint. **So why do we all wear the same mass-produced shoes ?**

... changing.

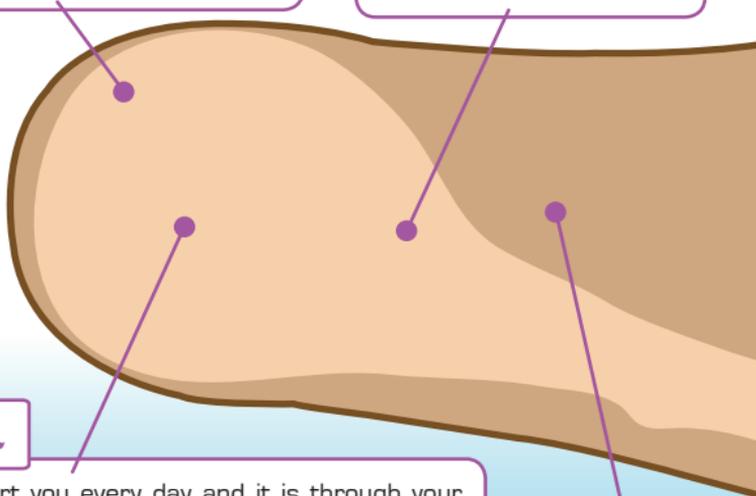
Your foot changes throughout your life. At 30 you won't have the same feet as you had at 20... **Your foot adapts to your body naturally.**

... sensitive.

Your feet support you every day and it is through your feet that you feel a very large number of sensations. They act like sensors that will have either a good or a harmful effect on your entire body. **Have you ever felt pain such as cramp or tendinitis ?**

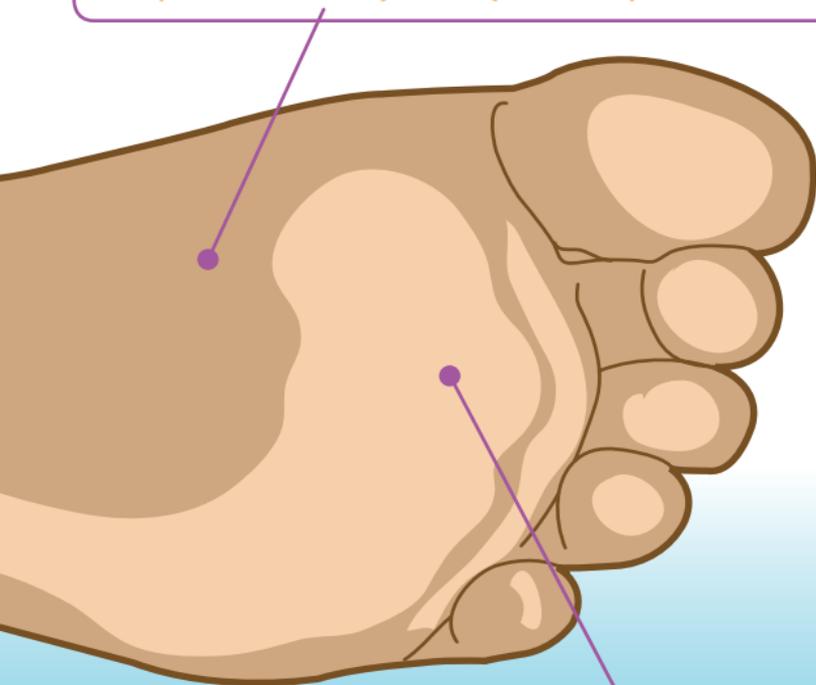
... alive.

Your foot behaves in a unique way. It reacts constantly to the stresses and strains on it. It constantly varies between pronation and supination. When running, in some cases it can lengthen by up to 1.5 cm. **Have you ever had a blister or overheated feet ?**



... complex.

Because it is so complex, we don't know exactly how a foot works, and to date we haven't been able to reproduce exactly how the foot moves. In your foot there are 28 bones (between them your feet contain a quarter of the bones in your skeleton), 16 joints, 107 ligaments and 27 muscles. Once their muscle strength starts to diminish, your feet have a tendency to sag, become deformed and absorb fewer shock waves. **Has your foot ever complained ? No... but you have (ouch, I've sprained something !)**



... your base.

Your foot is the base of your body. All your weight is supported by a few square centimeters. Your foot acts as a stabilizer, shock-absorber and a booster. It therefore plays an essential role in maintaining your body's balance and well-being. **Has it ever occurred to you that the pain in your joints could come from your feet ?**

How we walk

What happens when we walk :

1. The outside of the heel touches the ground first.



Side view of the left foot



Rear view of the left foot

2. The weight is transferred towards the inside of the arch of the foot.



Side view of the left foot

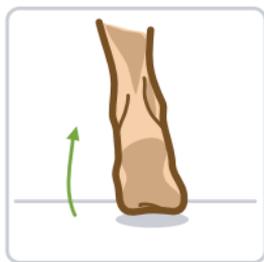


Rear view of the left foot

3. We push off to complete the step, mainly with our big toe.

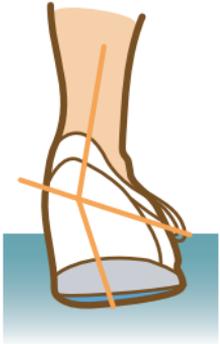
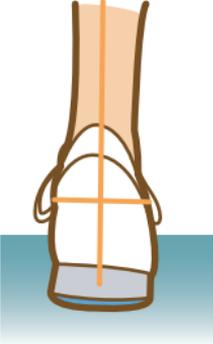
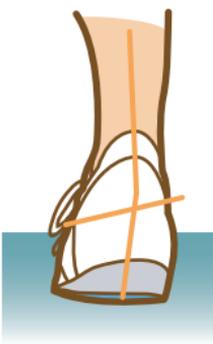
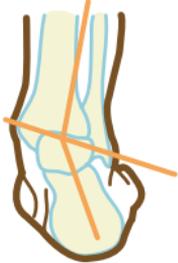
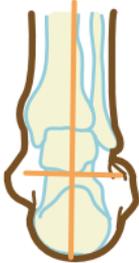
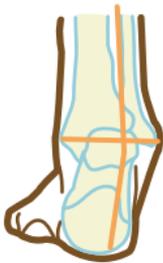


Side view of the left foot



Rear view of the left foot

Three main types of movement :

FOOT ANGLED OUTWARDS	FOOT STRAIGHT	FOOT ANGLED INWARDS
Stance [rear view of right foot]		
		
Skeleton [rear view of right foot]		
		
Arch of the foot [view of bones inside the foot]		
		

➔ So, mass-produced shoes cannot adapt to every foot !

Who should consult a foot specialist as a priority?

Reasons for consultations :

For all types of needs :



Children aged 4 and over : to guarantee that children grow correctly, it is essential that any gait problems are detected and resolved as soon as possible. An initial consultation is recommended at the age of 4, or earlier if the child is falling over frequently.

Children and adolescents who regularly practise a sport : advice from a foot specialist can prevent injuries and pathologies connected with growth.



Pregnant women : weight gain, slackening of the ligaments and a shift in the centre of gravity can cause pain when the foot is pressing down. A static stance and pressure assessment is recommended.



Sportsmen and women : people who practise a sport more than once a week risk injury and balance problems, as for example: when running, the repeated movements and shocks can create microtraumas which over time will cause problems of different kinds in the tendons (tendinitis), joints (arthritis) and muscles (cramp and torn muscles).



People who wear safety boots : rigidity is bad for your feet, but this can be offset by a suitable insole made by a foot specialist.

What part does a foot specialist play ?

He will carry out a full podiatric assessment and if necessary, suggest a suitable solution.

The podiatric assessment :

Stage 1 : Investigating requirements.

The foot specialist fills out with the patient a questionnaire about his or her lifestyle, medical history, location of pain, etc.



Palpation on the treatment couch

Stage 2 : Clinical examination of the patient.

The foot specialist investigates and palpates the foot to analyse the patient's morphology. This stage is carried out with the patient first lying down then standing up ; the foot specialist tries to assess different aspects of the patient: joints, muscles, blood vessels, senses, morphology and skin.



Observation on a posturscope

Stage 3 : Gait analysis.

The aim is to see whether the patient's gait confirms the problems detected in the analysis. It consists of observing the forward foot movement and posture.



Gait analysis

Stage 4 : Observation of deformation and shoe wear

This stage ascertains the effects that the patient's surroundings and habits (urban location, sport, work) have on the functioning of his or her foot, and confirms the previous stages.

	PRONATION WEAR	UNIVERSAL WEAR	SUPINATION WEAR
Sole of left foot			

Stage 5 : Moulding footprints.

If plantar orthotics need to be made, the foot specialist makes moulds of the patient's footprints. Various techniques can be used for this: an imprint box containing expanded foam, ink and paper, a scanner or pressure sensors.



The solutions provided by the foot specialist

Once the patient's requirements have been established, the foot specialist suggests the best solution for correcting or improving his/her posture and preventing or relieving the pain.

Custom-made plantar orthotics :

One of the solutions can be to make a thermoformed plantar orthotic, orthoplasty, brace, orthonyxia, etc.



Unmoulded orthotic

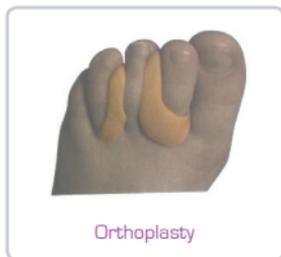


Foam orthotic



Resin orthotic

Other possible devices :



Orthoplasty



Night brace

Quality information

To ensure you obtain high-quality orthotics, ask your foot specialist if he or she uses Podiatech-brand materials and modules. (Materials : Viscotene®, Podiane +®. Modules : SPCT®, OPCT®).

In the professional's workshop :

The 6 techniques used to make a thermoformed plantar orthotic.

By thermopressure :



Formed in the neutral position directly on to the foot.



Formed in the corrected position directly on to the foot.



Moulded dynamically directly on to the foot in the footwear.



Thermowelded.



Shaped onto a positive.

By thermal expansion :



Moulded in a liquid with expanding material.



Practical information

The plantar orthotics may have to be renewed regularly (wear of the materials, changing requirements). They are washable.

>>> Tips for cleaning plantar orthotics :



Hand wash in warm, soapy water (30 °C).



Do not expose to sunlight or any other source of heat.



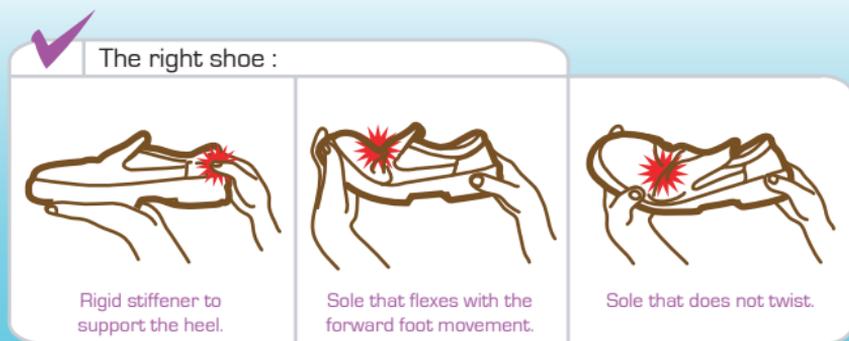
Remove the plantar orthotics at night to allow them to dry.

The foot specialist : there to make sure your shoes fit properly

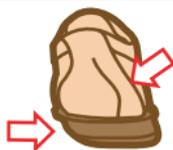
There are three essential aspects being well in your shoes :

1. Choosing the right footwear :

The foot is the most fragile and sensitive part of a person's body. Choosing footwear that fits the foot properly will almost always avoid the onset of deformations and pain in the forefoot. The most suitable footwear maintains an even distribution of the load between the rear foot and forefoot.



- ↻ Heel no more than 3 to 4 cm high.
- ↻ A rear stiffener that is fairly rigid will provide a snug fit for the heel.
- ↻ The footwear must be sufficiently wide and have a rounded toe to give the toes enough room to move and allow them to remain in an anatomical position.
- ↻ Allow a space of 1.5 cm at the toe.
- ↻ Choose the right size.
- ↻ Beware of the way a shoe loses its shape when walking !



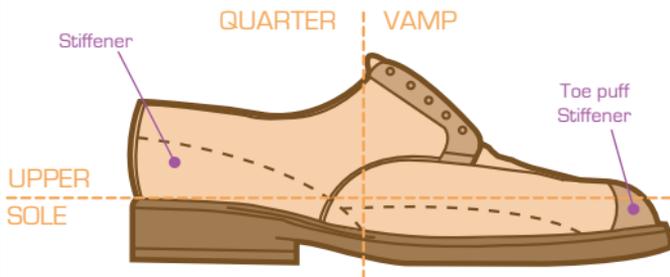
Deformation with
pronation



Deformation with
supination

Practical information

>>> The structure of a shoe :



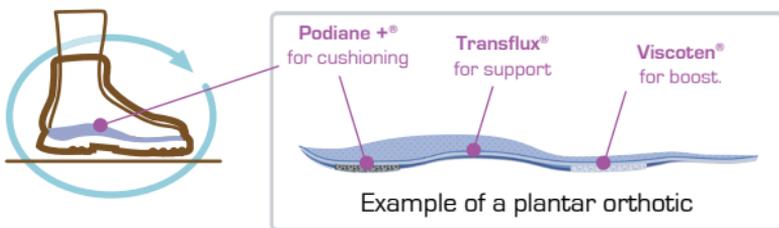
2. Choosing the right sock :

- ➔ Comfortable : differentiation between the left foot and the right foot, reinforcements to avoid friction and blisters, flat seams to reduce compression.
- ➔ Breathable : to ensure temperature regulation of your feet, whatever the season.

Materials are becoming increasingly technically sophisticated. A foot specialist will help you make the right choice.

3. Obtaining suitable plantar orthotics :

Plantar orthotics are indispensable to your well-being. They form the perfect interface between your foot and your footwear, ensuring optimum comfort and sensations. Plantar orthotics can be very thin and made suitable for the different types of footwear.



Quiz

Prevention

- Do your child's feet or knees hurt when he/she does sport ?
- Do you wear safety boots ?
- Are you aged over 70 ? If you are, have you ever lost your balance while walking ?
- Do you practise a sport for more than 2 hours a week ?

Foot pain : forefoot and heel

- Do your feet hurt in the morning, at night or at the end of the day ?
- Do you feel your nerves firing or experience tingling or pins and needles ?
- Do you have a corn under your forefoot ?
- Do your feet hurt when you wear a particular shoe?
- Do you have persistent pain under your heel, on the inside of or at the back of your foot?

Knee pain

- When you are sitting down do your knees hurt ?
- When you walk downstairs, run or walk for a long time does it hurt ?
- Do your knees hurt when you wear a certain type of shoe ?

Back pain

- Do you stand up a lot at work, and do you get pain in the small of your back ?
- Do you feel your nerves firing or experience pins and needles in one leg ?
- Do you lose the feeling in one or more toes ?

If you have answered yes to more than 3 questions, we recommend that you consult a foot specialist.

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