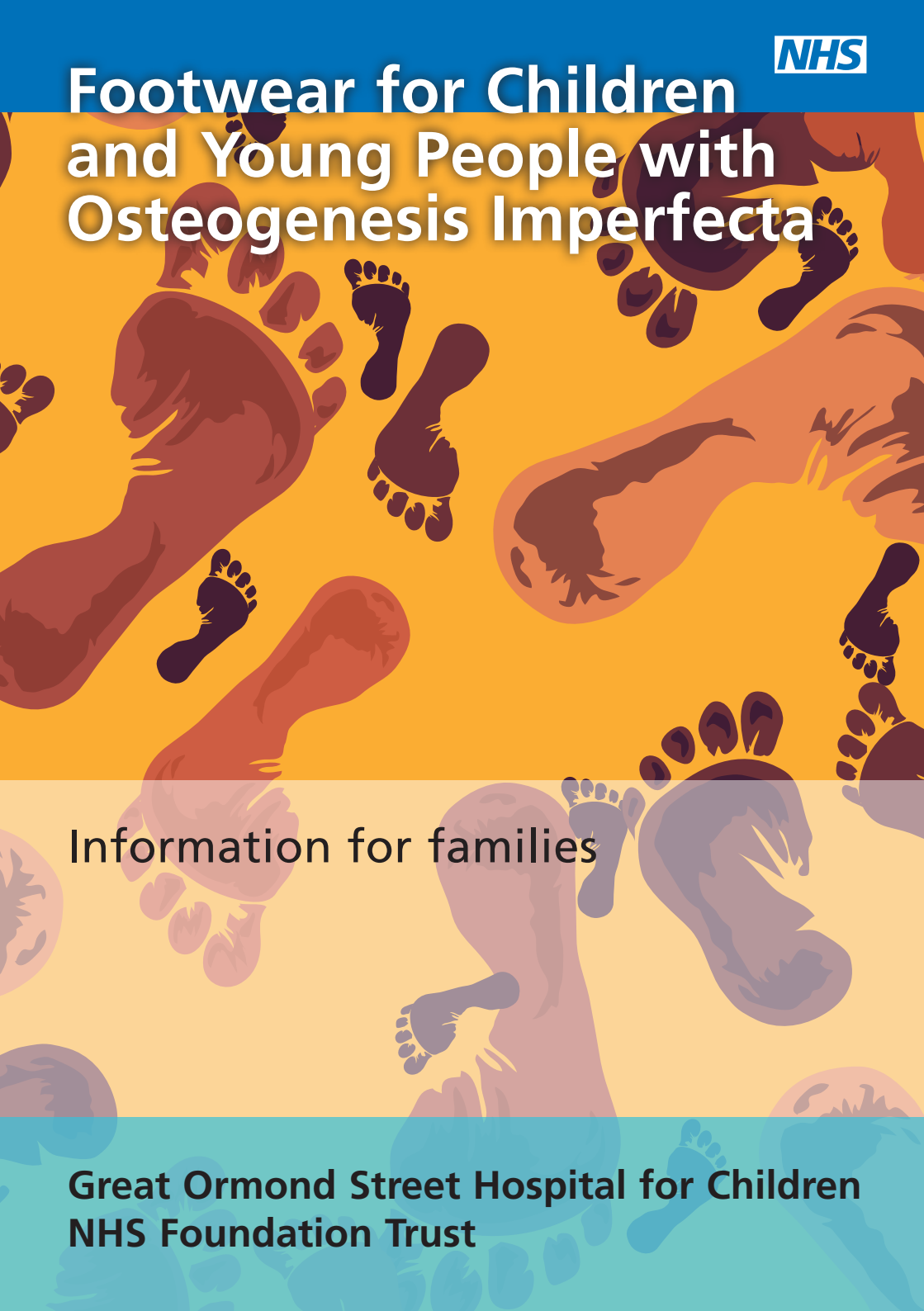


# Footwear for Children and Young People with Osteogenesis Imperfecta

The background of the entire page is a vibrant orange. It is decorated with numerous footprints of various sizes and colors, including dark brown, light brown, and purple. Some footprints are complete, while others are partial, creating a sense of movement and growth. The footprints are scattered across the page, with some appearing larger and more prominent than others.

Information for families

Great Ormond Street Hospital for Children  
NHS Foundation Trust

## **Wearing suitable footwear is important for children and adolescents with Osteogenesis Imperfecta (OI).**

**Hypermobility (when joints move more than normal because of lax ligaments) is a common feature of OI. Hypermobility in the joints of the feet and ankles may cause the feet to roll in, giving an excessively flat-footed appearance. Hypermobile joints are less stable, which can lead to increased sprains, trips and falls. Over time, pain can become an issue. Foot shape in some children with OI changes following fractures or due to bowing of leg bones.**



*Child with OI with flattened foot arches and significant rolling in of the left ankle.*

**Wearing suitable shoes is strongly recommended to give adequate support, prevent injury and provide comfort in children with OI.**

## Advice for buying shoes:

### ■ **Baby shoes:**

Young infants who are not yet walking do not usually require shoes – however you may wish to purchase soft shoes to protect feet and keep them warm. Make sure there is enough room to wiggle toes freely.

### ■ **Getting the right size:**

Always get your child's feet measured by a trained shoe fitter – shoes which are too small may impact on the foot's shape and growth, and cause pain. Aim to have approximately 1cm of space between toes and the end of the shoe.

### ■ **Getting the right shape:**

The front of the shoe should be wider than the heel. Pointy shoes can restrict toe movement and cause pain. The back of the shoe should also not be too shallow as this will allow the child's heel to slip out of the shoe.

## Getting the right type:

- Shoes should be firm around the heel but the sole should be flexible enough to allow some bend. If you are able to twist the sole, the shoe is too flexible and will not give enough support.
- Make sure that shoes have an adequate grip under the sole to prevent slips on smooth surfaces.
- Consider the weight of the shoe – heavy and stiff shoes such as some hiking and fashion boots can make walking more of an effort as well as more tiring.
- Very flat thin-soled shoes, such as plimsolls and ballet pumps, do not give enough support. They are best worn indoors and for short distances only.
- Slip-on shoes, sling-backs and flip flops do not stay on the foot well, increase the risk of tripping and do not provide support to the foot– we generally do not recommend these.
- If wearing high-heeled shoes, aim for those with smaller and wider heels. We do not advise wearing high-heeled shoes during prolonged standing and walking.
- Appropriate sports trainers should be worn during PE and exercise.
- Generally, shoes which come higher up the ankle (high-tops) provide more support than low rise shoes.
- Be aware that shoes with synthetic linings may cause excess sweating.
- Shoes can be either lace-up or Velcro® fastened but it is very important that these are undone and re-fastened each time the shoe is put on or taken off. If this is not done, the back part of the shoe becomes damaged and the shoe becomes loose on the foot providing less support.

## Specialist Shoes

If finding suitable shoes is a problem, due to pain, foot shape or marked hypermobility, your child may benefit from specialist shoes. These are usually provided by a specialist department and will require an assessment from a Physiotherapist, Orthotist or Podiatrist. Please discuss this with your child's medical team.

## Insoles

Sometimes children with OI benefit from insoles worn inside shoes to correct foot posture and provide extra stability around the ankle. These should be provided by a specialist department and will require an assessment from a Physiotherapist, Orthotist or Podiatrist. Insoles should be made-to-measure. We do not recommend buying 'ready-made' insoles without having a suitable assessment.

## Normal Feet

It is normal for infants and young children to have flat feet. Foot arches will gradually develop in the first decade of life. It is important to differentiate between normal flat feet and the altered foot position often seen in OI due to hypermobility or bony changes. Your medical or therapy team will be able to advise you on when suitable footwear or specialist assessment is required.

*Examples of specialist insoles*



## Summary/Key Points

- Children and young people with OI often have hypermobile joints. Wearing suitable shoes will give extra support to hypermobile feet and ankles.
- Supportive shoes with a firm heel and non-slip sole should be worn for school and everyday use. High-top shoes may give more support at the ankle.
- Avoid shoes which are too flat and unsupportive, such as flip flops, sling backs, plimsolls and ballet pumps.
- Fashion and party shoes are fine for special occasions but wearing sensible shoes for regular everyday use is best.
- Make sure your child wears appropriate trainers during PE and sports, rather than plimsolls.
- Sometimes insoles and specialist shoes are needed to correct foot posture, improve stability and joint alignment. Please seek advice from your medical or therapy team prior to purchasing insoles or special shoes.

**Comments**



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Compiled by the Osteogenesis Imperfecta Physiotherapy team  
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