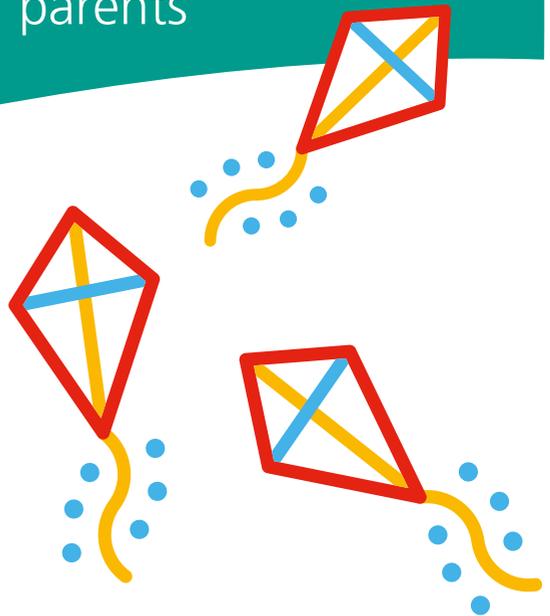


# EDF (Elongation / Derotation / Flexion) casts

Information for parents  
and carers



## What is scoliosis?

Scoliosis is a lateral (side to side) curvature of the spine. It can occur any time during a child's growth.

There are four main causes for a curve:

- congenital (present at birth);
- neuromuscular (caused by a condition like cerebral palsy or muscular dystrophy);
- idiopathic (the cause is unknown) - in 80% of cases, the cause is unknown; and
- syndromic.

Scoliosis in a child who is 3 years old or younger is also known as infantile scoliosis.

## How is scoliosis treated?

Scoliosis is treated to prevent worsening of the curve. The treatment will depend upon the severity of your child's curve and / or your child's age.

The treatment options are:

- observation
- casting / bracing, and
- surgery.

### Observation

Your child's consultant may decide to monitor your child's scoliosis over a period of time. This will be done by attending clinic appointments at the hospital.

The appointment will usually involve your child having an x-ray. The doctor will compare the new x-ray to your child's previous x-rays to assess if the scoliosis is becoming worse.

## Casting

Many children will need their spine to be guided into its normal position as they grow, which can be done by putting them in an EDF cast. This cast is applied under general anaesthetic.

EDF (Elongation / Derotation / Flexion) casting is used in infantile scoliosis. Casting is used to enable the spine to be guided into its normal position as the spine grows. The aim is to straighten the spine or prevent deterioration of scoliosis, while the lungs are still developing. The EDF cast will put gentle pressure on your child's ribs. Since the ribs are attached to the spine, moving them also moves the spine.

## Bracing

Some children may be suitable to have a brace to help prevent the progression of their scoliosis.

## Surgical treatment

Surgical treatment may be appropriate for large curves. Surgery is only suitable for children once they reach a certain size.

## No treatment

With no treatment, the risk is the curve will continue to progress, which in turn can lead to further health complications, including restriction of normal lung development.

**You and your child's consultant have decided that an EDF cast is the best treatment for your child.**

## Preparing your child for their EDF cast

### Pre-assessment

Before your child attends hospital for their cast, you will both attend pre-assessment which is situated on C Floor, Martin Wing, Leeds General Infirmary, where the nurses will undertake some tests to ensure your child is fit for a general anaesthetic and for their EDF cast application.

Tests include:

- blood tests;
- electrocardiogram (ECG) - tracing your heartbeat;
- lung function test - breathing test;
- urine test - screening for infection;
- x-rays;
- ISIS body surface scan; and
- routine swabs and decolonisation.

Once your child has been to pre-assessment, you will receive a letter from the theatre scheduling team giving you a date to come in for your child's EDF cast application.

The letter will provide instructions on what time you need to come into hospital and when your child should stop eating and drinking.

### How the cast is put on

Your child will require a general anaesthetic to have their EDF cast applied. This is to ensure that your child remains still throughout the casting process and in the correct position.

## Cast application day

On the day of your child's operation, you will need to come to the Children's Day Case Unit, L49, D Floor, Claredon Wing, Leeds General Infirmary at the time specified on the admission letter.

The nursing team will go through your child's paperwork to check that there have been no changes since pre-assessment. Your child may also be seen by the anaesthetist, spinal nurse specialist and a member of your child's consultant's team.

A nurse from L49 will escort you and your child to the anaesthetic room, where the anaesthetist and operating nurse will be waiting. The anaesthetic room is where your child is put to sleep for their cast. Yourself and one other parent / carer can accompany your child to the theatre doors and one of you can accompany your child to the anaesthetic room, where you can stay until your child has fallen asleep.

Once your child has fallen asleep, the nurse will then escort you back to the ward where you can wait. Once the cast is applied, your child will go into recovery until they wake up. Once your child is starting to wake up, the recovery nurse will ring the ward for you to go to the recovery room. Once your child has fully woken up, the recovery nurse will take you and your child back to L49, where you will stay until your child is discharged home.

In order for your child to be discharged home, they must drink, eat and pass urine. Even though we anticipate that your child will be discharged home the same day, we ask you to bring an overnight bag for yourself and your child, just in case.

Your child will be followed up by the children's spinal nurse specialist at 2 weeks by telephone and then be seen in clinic, 6 - 8 weeks after their cast has been applied.

## How to care for the cast

The cast must be kept dry (this means no baths, showers or swimming). Pink felt can be used around any rough edges. You will be given some before your child is discharged from the ward.

Your child should still be able to move around and fit into their pushchair, car seat, and go to nursery as normal. You may need larger sized clothes while they are in the EDF cast.

It has been recommended that a smaller nappy to tuck under the cast is better and prevents leaks.

There will be a hole in the chest area of the cast, which allows for your child's lungs to expand and breathe. We call this a burger hole.

## How often is the cast changed?



Your child's cast is normally changed around every 3 months. The cast gets taken off in the plaster room a couple of days before the new one is applied.

While your child does not have their cast on, we encourage you to give them a bath and moisturise their skin. This can also be an opportunity to go swimming.

## Complications

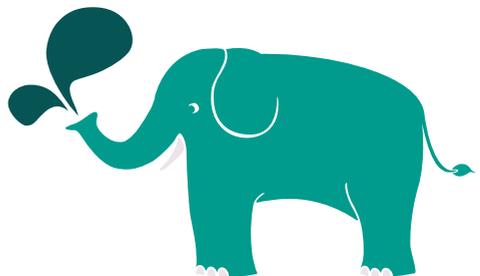
Sometimes, your child may be in some discomfort / pain after the application of cast. We advise for them to take some paracetamol.

If your child complains of tingling in their legs or feet, their skin changing colour or they are vomiting after every meal, then please call for advice.

If you're worried the cast appears to be very tight, has cracked or broken, please contact the plaster room or children's spinal nurse specialist for advice.

Some breakdown of the cast is normal over the 3 months that it is worn.

If your child is finding it difficult to sleep, previous patients have found a V-shaped pillow helped.



## Useful contact numbers

If you have any questions or concerns, please contact:

**Children's Spinal Nurse Specialist:** Laura Sharlotte

Tel: **0113 3923648** Mobile: **07392 287623**

Spinal Theatre scheduling: **0113 3922076**

Plaster Room: **0113 3925717**

Pre-assessment: **0113 3923154**

Ward L49: **0113 3927449**

## Useful information

[www.sauk.org.uk](http://www.sauk.org.uk)

[www.britscoliosissoc.org.uk](http://www.britscoliosissoc.org.uk)

[www.leedsth.nhs.uk/patients-visitors/our-hospitals/leeds-childrens-hospital/](http://www.leedsth.nhs.uk/patients-visitors/our-hospitals/leeds-childrens-hospital/)

While you are under the care of the spinal team, we will discuss the British Spine Registry (BSR) with you. This is a web-based database, for the collection of information about spine surgery in the UK. It helps your consultant spine surgeon and other medical practitioners understand more about spinal procedures and how to better improve patient care for your child and future patients.

**What did you think of your care?** Visit [bit.ly/nhsleedsfft](https://bit.ly/nhsleedsfft)  
*Your views matter*

© The Leeds Teaching Hospitals NHS Trust • 2nd edition (Ver 1)

Developed by: Charlotte Tasker, Clinical Nurse Specialist and  
Laura Sharlotte, Children's Spinal Nurse Specialist

Produced by: Medical Illustration Services • MID code: 20180228\_010/IH

LN001751  
Publication date  
04/2022  
Review date  
04/2024