

Epiphysiodesis and guided growth plates

Information for children, families and carers

We have given you this factsheet because your child's consultant (doctor) has recommended your child has an operation called epiphysiodesis to completely stop the growth of their leg, or temporarily stop the growth, using guided growth plates. It explains what the operation involves and the possible complications. We hope it helps to answer some of the questions you may have. If you have any further questions or concerns, please contact us using the details at the end of this factsheet.

What is epiphysiodesis?

Epiphysiodesis is the name given to surgery that is performed on the growth plate (growing part) of the bone to stop it growing permanently. This surgery is often performed when one leg is shorter than the other, to stop the growth of the longer leg, allowing the other leg to catch up over time, and 'even up' the limbs. Epiphysiodesis may also be used to correct an angular deformity of the leg.

What are guided growth plates?

Guided growth plates (sometimes called eight-plates because they are shaped like a number '8') are small metal plates used to correct a deformity affecting the angle of the bone (for example, knock knees). They are inserted into one side of the growth plate, guiding growth of the limbs until they are straight. They can also be used to temporarily stop the growth of a leg if one is longer than the other.

The timing of each procedure is crucial and is calculated to allow the shorter leg to catch up by the time your child's growth stops.

How should I prepare for my child's operation?

Pre-assessment appointment

We will arrange a pre-assessment appointment for your child before their operation. At this appointment, we will advise:

- when your child should stop eating and drinking before their operation (this information will also be included in your child's admission letter)
- if your child needs to stop taking any medications before their operation

Items to bring

This operation is usually performed as a day case. This means your child should be able to go home on the same day once they are well enough. However, in some cases, they may need to stay in hospital overnight to recover. We recommend packing a small overnight bag for you and your child just in case (you do not need to pack any bedding as we will provide this).

What will happen before the operation?

Consent

The surgeon will discuss the operation with you and your child. This is a good opportunity for you to ask any questions you or your child may have. If you are happy to proceed with the operation, we will then ask you to sign a consent form.

General anaesthetic

Your child will need to have a general anaesthetic (medicine to make them go to sleep) for this operation. Having a general anaesthetic will mean that that your child will remain still for the operation and will not feel any pain. An anaesthetist (a specialist doctor) will discuss what having a general anaesthetic involves with you and the possible complications.

What will happen during the operation?

The operation will be performed in an operating theatre by a surgeon.

Once the general anaesthetic has taken effect, the surgeon will:

- make one or two small cuts in your child's leg
- insert guided growth plates (small metal plates) into one side of your child's growth plate
- close the wound(s) with dissolvable stitches (stitches that do not need to be removed)
- place a small dressing over the wound(s) and then a thicker bandage on top.

How long will the operation take?

The operation usually takes 30 to 60 minutes.

What will happen after the operation?

We will move your child to the recovery room where we will monitor them until they come round from the general anaesthetic. Once your child is awake, we will take you to see them. We will then move your child to the John Atwell day ward or ward G3 to continue their recovery.

We will give your child something to eat and drink once they are fully awake.

A physiotherapist will come and visit your child on the ward before they go home. Some children may need crutches for a short while after their operation to help support them to walk. If this is the case, the physiotherapist will provide you with these.

If your child is well enough to go home on the same day as their operation, they will need to have a responsible adult to take them home and stay with them for 48 hours.

Aftercare

Wound care and dressings

You should remove your child's bandage the day after their operation, leaving the small dressing in place.

Your child may have one or two scars, at the top of their tibia (just below their knee) and at the end of their femur (just above their knee).

Walking

Your child will be able to walk as soon as they are comfortable. You should encourage your child to move their knee normally after their operation.

Washing and showering

How long your child will need to keep their wound(s) and dressings dry for after their operation will vary. We will provide you with specific guidance about washing and showering before your child leaves hospital.

When will my child be able to go back to school?

Your child will be able to go back to school when they feel comfortable. You may need to talk to your child's school about making some reasonable adjustments for the first few days.

What follow-up care will my child receive?

We will arrange to see your child regularly in the clinic to check their leg length difference or angular correction.

If we have used guided growth plates, and your child is still growing, they will need to have another operation to remove them under a general anaesthetic. If an x-ray shows that there is no more growth left then the plates can remain in. We will discuss this with you in more detail and advise the next steps for your child.

What will happen if my child does not have the operation?

If your child does not have the operation, the length of their legs will remain different or the angle deformity will remain.

What are the possible complications?

We will ensure that your child's stay in hospital and the treatment they receive is as safe as possible. However, all medical procedures carry some risk and there is a possibility that complications might arise. Please ask us if you would like any more information about complications or if there is anything you do not understand.

General complications of surgery

- **Pain:** we will prescribe pain relief medication as necessary.
- **Bleeding:** this can happen during or after the operation.
- **Scarring:** there may be scarring as a result of the surgical cut.
- **Infection:** if the surgical wound becomes infected, we will prescribe antibiotics to treat this. Your child may also need to have another operation depending on the extent of the infection.
- **Altered feeling:** there may be temporary or permanent altered feeling at the operation site.

Specific complications of surgery

- **Epiphysiodesis:** If the operation is performed too late, the leg length difference may reduce but some difference in length may remain. If the operation is carried out too early, the length difference may be corrected but a further operation may then be needed if the other leg continues to grow.
- **Guided growth plates:** Very occasionally, the guided growth plates can move and may need replacing. Incomplete correction or deformity in the other direction may happen. This depends on the timing of surgery.

Follow-up is essential to avoid these possibilities.

Contact us

If you have any questions or concerns, please contact us.

Advanced clinical practitioner team

Telephone: **023 8120 6462** (Monday to Friday, 7am to 6pm)

Email: childrensorthoacp@uhs.nhs.uk

Ward G3: **023 8120 6486** (24-hour line)

Alternatively, you can contact your child's general practitioner (GP) for advice.

Useful links

British Red Cross

Telephone: **0300 456 1914**

www.redcross.org.uk/get-help/borrow-a-wheelchair

If you are a patient at one of our hospitals and need this document translated, or in another format such as easy read, large print, Braille or audio, please telephone **0800 484 0135** or email **PFSH@uhs.nhs.uk**

For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit **www.uhs.nhs.uk/additionalsupport**