Your child's midline

Information for children, families and carers

We have given you this factsheet because your child may need to have or has had a midline inserted as part of their treatment plan. It explains what a midline is and what the procedure for having a midline inserted involves so that you know what to expect and can help to prepare your child. We hope it helps to answer some of the questions you may have. If you have any further questions or concerns, please speak to a member of your child's healthcare team.

What is a midline?

A midline is a long, thin, flexible tube that is inserted into one of the veins in the arm or leg. It is used to safely administer intravenous (IV) medication directly into a person's vein.

A midline can usually be left in for up to four weeks unless it needs replacing (your child's healthcare team will advise you if this is the case).

Why does my child need to have a midline?

The reason for your child having a midline inserted will depend on their medical condition and their treatment plan. Your child's healthcare team will discuss this with you in more detail.

A midline is commonly used to give treatments, such as:

- intravenous fluids
- intravenous antibiotics

What are the benefits of a midline?

Having a midline can help your child to feel more comfortable when they receive treatment. A midline can:

- reduce irritation that certain medications can cause to smaller veins
- preserve vein health
- prevent the need for multiple needle punctures (for example, repeated cannula insertion)

How should I prepare my child for the procedure?

Eating and drinking

Your child can eat and drink as normal before the procedure unless their healthcare team have advised that they need to have sedation (medication that makes you drowsy) for the procedure. Your child's healthcare team will discuss this with you before the procedure.

Medication

Your child can continue to take their usual medications before the procedure. However, if your child is taking any blood-thinning medications (for example, aspirin or enoxaparin), it is important that you tell us this before their procedure as these medications can increase their risk of bleeding.

Who will perform the procedure?

The procedure will be performed by an advanced nurse or doctor.

Where will the procedure be performed?

We will usually perform the procedure in a treatment room. However, if we are due to insert the midline while your child is having a separate procedure under general anaesthetic (medication that sends you to sleep), we will perform this in an operating theatre.

What will happen on the day of the procedure?

Before your child's procedure, we will explain what the procedure involves, including the risks and benefits of having a midline. This is a good opportunity for you to ask any questions you may have. We will then ask you if you are happy to go ahead with the procedure.

We may then apply a local topical anaesthetic (numbing cream) to the area of skin where we will be inserting the midline (this will be either an area on the arm or leg). We will do this 45 to 60 minutes before your child's procedure to allow the cream time to work. Please note that the numbing effect of this cream can last up to four to six hours after it is applied.

Depending on your child's age and individual needs, we may also recommend that your child has oral sedation (medication that makes you drowsy) for the procedure. If this is the case, we will discuss this with you.

What will happen during the procedure?

The insertion of a midline is a minimally invasive procedure.

Depending on which vein we are going to use, we will clean your child's arm or leg with antiseptic. We will then insert a small cannula (plastic tube) into your child's vein using ultrasound (a procedure that uses high-frequency sound waves to create an image of part of the inside of the body) to correctly guide the placement of the cannula.

We will then feed a very fine wire through the cannula. Once the wire is in the correct place, we will remove the cannula. We will then feed the midline over the wire, before withdrawing the wire. We will then flush the midline with saline (a mixture of salt and water) to check that it is in the right place and working correctly.

Lastly, we will place a large clear dressing over the top of the midline to secure it in place. You may cover your child's midline with an additional bandage or Tubigrip for extra protection if you wish.

How long will it take?

The procedure will take approximately 15 to 30 minutes.

What will happen after the procedure?

Once the midline has been fixed in place, it will then be safe to use immediately.

If your child is currently an inpatient at the hospital (staying in hospital for treatment), we will take your child back to their ward.

If your child is an outpatient (not staying in hospital) and has had a:

- **local topical anaesthetic**, they will need to wait 15 to 30 minutes until the midline insertion site (place where the midline goes into the vein) is no longer bleeding before they can go home.
- **local topical anaesthetic and oral sedation**, they will need to stay in hospital for a period of observation (usually a minimum of one hour) to make sure that they are well after the procedure. Your child's healthcare team will let you know when it is safe for you to take your child home.

Are there any risks or complications?

Insertion

It can sometimes be difficult to find a suitable vein or to place the midline into the correct position. This is usually due to the size of the veins or if the veins have been used before for lines. If this is the case, we may have to insert a different type of line. We will discuss these options with you before your child has their procedure.

Infection

It is possible for an infection to develop inside or around the midline insertion site. It is important that you look out for any signs that your child's midline may be infected.

Contact your child's healthcare team **immediately** if your child experiences any of the following symptoms:

- a fever (a temperature of 38°C or above) or chills
- persistent irritability
- any changes at or around the insertion site, such as:
  - redness or swelling
  - skin that is hot to touch
  - a sudden increase in pain
  - discoloured fluid (discharge)

Blood clot (thrombosis)

It is possible for a blood clot to develop around the midline, but this is rare. If this occurs, we will give your child medication to dissolve the clot and we may need to remove the midline. Contact your child's healthcare team **immediately** if your child experiences increased pain, redness or swelling in the limb where the midline is inserted.

Vein inflammation (phlebitis)

Occasionally, the midline may irritate the vein wall, which can cause pain and redness along the length of the vein. If this occurs, place a warm compress (for example, a microwaveable heat pack) on your child's limb where the midline is inserted. This will help encourage good blood flow around the midline. If you have any concerns, contact your child's healthcare team.

Bruising or bleeding

It is common to experience some bruising or bleeding at the insertion site immediately after the midline has been inserted. It is important that you tell us if your child is taking any blood-thinning medications before we insert the midline, as this can increase their risk of bleeding. If bleeding occurs, place a piece of gauze or cotton wool over the insertion site and apply firm pressure for at least 30 to 60 seconds (or until the bleeding has stopped).

A break or split in the midline

It is important that your child's midline is not broken or cut. It is very rare for a line to break or split, but if it does happen, contact your child's healthcare team immediately. The midline may need to be removed or replaced.

A dislodged midline

Your child's hospital and/or community team will monitor your child's midline on a regular basis. However, please be aware that the midline can become dislodged from its correct position if pulled. It is uncommon for the whole line to be pulled out, but if this happens, you should:

- use a clean piece of gauze or cotton wool to apply pressure over the insertion site for 30 to 60 seconds (or until the bleeding has stopped)
- cover the area with a plaster
- contact your child's healthcare team to inform them

Damage to surrounding tissues or vessels (nerves and arteries)

We will minimise these risks by:

- using ultrasound guidance to locate the vein when inserting the midline (this allows us to avoid nerves and arteries)
- inserting the midline away from the joints (this will help to reduce the movement of the line, minimising discomfort in the arm or leg)

How do I care for my child's midline?

Activities and exercise

Having a midline should not stop your child from carrying out their normal day-to-day activities or going to nursery, school, or college. However, we do advise that the line remains covered (either with a bandage or Tubigrip) and your child avoids swimming and heavy contact sports (for example, rugby) while they have a midline in place.

Washing and bathing

Your child's midline and dressing must not get wet.

Your child can have a shallow bath, but it is important that they keep their midline and dressing away from the water as much as possible. To avoid the midline getting wet, we recommend covering it with cling film and a towel. If any splashes occur, gently pat the water dry with a towel.

Caring for your child's midline

You should always wash your hands with liquid soap and warm water before and after handling your child's midline.

A member of your child's healthcare team (local hospital or community team) will arrange an appointment at least once a week to review and flush your child's midline (if not using daily).

If you have any concerns about your child's midline or dressing, contact your child's community team or hospital team.

When will my child's midline be removed?

Your child's midline can be removed once your child has finished their treatment. This will be organised by your child's local hospital or community team. If you are unsure about the length of your child's treatment plan, please speak to your child's healthcare team.

Removing a midline is a simple and quick procedure. It is usually performed by a nurse and takes a few seconds. The nurse will remove your child's dressing (some children may find this uncomfortable) before gently pulling the midline out (most children do not feel this part at all). The nurse will then cover the site with a plaster or gauze and tape. You can remove this dressing after 15 to 30 minutes.

Who should I contact if I have any concerns?

If you have any questions or concerns, contact a member of your child's healthcare team using the relevant details below.

Your child's community team: _____
Telephone: _____ (Monday to Friday, 9am to 4pm)

Your child's discharging ward: _____
Telephone: _____ (available 24 hours a day)

Alternatively, if your child is under the care of our paediatric outpatient parenteral antimicrobial therapy (pOPAT) service, you can call the pOPAT team on: **07776 497313** (Monday to Friday, 8am to 4pm and weekends, 9am to 1pm).

For any **urgent concerns**, please take your child to your nearest emergency department or call **999**.

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

Version 1. Published August 2026. Due for review August 2029. 3817