NHS
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Surgery to lengthen your child's small bowel (STEP procedure)

Children's Hospital

Information for patients, parents & carers

Produced: March 2026
Review: March 2029
Leaflet number: 1719 Version: 1

What is short bowel syndrome (SBS)?

Short bowel syndrome (SBS) happens when the small bowel is too short. It cannot fully take in the nutrients your child needs to grow like water, protein, fat, and sugar.

Your child may have:

- bloating
- diarrheoa
- weight loss
- poor growth
- deficiencies in certain vitamins and minerals

SBS can happen when a child's intestine is injured and surgeons need to remove part of it. Here are diseases or conditions that can cause this:

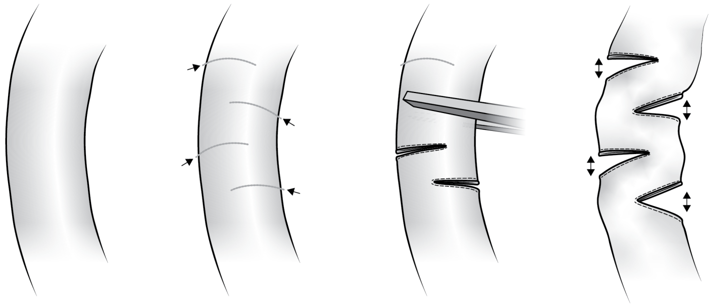
- Swelling (inflammation) in the bowel (necrotising enterocolitis). This is the most common cause.
- Twisting of the bowel (intestinal malrotation with volvulus).
- Baby's bowels grows outside their body (gastroschisis).
- Parts of the bowel do not grow properly (intestinal atresia).
- Injury or damage to the bowel (trauma)

Children with SBS often need to get a special type of nutrition through the vein. This helps them grow. This is called parenteral nutrition (PN).

Your child may need bowel lengthening surgery like the STEP procedure. This is if your child needs long-term PN or has other problems.

What is STEP procedure?

- The operation will try to make your child's small bowel longer. This is called serial transverse enteroplasty procedure (STEP for short).
- It will help them digest food better.
- We do this under general anaesthetic. This means you child will be asleep during the procedure.
- The surgeon will use a special tool to cut and staple the bowel in a zigzag pattern. This makes it longer than it was before.
- The procedure may take 2 to 4 hours to do.



What are the benefits?

- It helps to take in the nutrients from foods better.
- Your child will need less PN. Many children may still need PN support.
- STEP uses the child's own bowel. This means your child will not need medicine to stop their body from rejecting the procedure. The doctors can repeat the process if needed.
- This procedure is simpler compared to other surgeries for this condition.

Are there any risks?

1 in 10 children can get (common):

- pain
- discomfort
- bleeding
- bruising

1 in 50 children get (less common):

- infection
- a swollen lump filled with pus (abscess formation).

1 in 100 children get (rare):

- leaking from where the staples has been added.
- blockage in the bowel.
- may need more treatment.
- may need small bowel transplant.

What are the other treatments?

- Your child can keep taking PN without surgery.
- Your child can get other types of bowel lengthening operation like Bianchi procedure. This is a more complex surgery to do.
- Your child can get a bowel transplant. This is last resort if all other treatments fail.

What happens before the operation?

- We will ask you to sign a consent form. This tells us that you agree to your child having the treatment and you understand what will happen.
- Your child must attend a pre-assessment clinic. At this appointment, we will make sure your child is fit for their general anaesthetic.
- We will give you more information about what will happen on the day of your child’s operation or planned test before their hospital stay.
- You and your child will get the chance to ask any questions you may have.
- We will give you information on fasting before the operation. We will let you know when to bring your child in. This may be in the morning or the afternoon.
- Please make sure you bring a list of any medication that your child may be taking. This includes any over-the-counter or other medicines.
- On the day of surgery you will need to arrive at the ward on time. This is so that you can meet the surgeon and anaesthetist.
- The nurses will prepare your child for surgery. They will change your child into a theatre gown. They will doing basic observations and take them to theatre.

What happens after the operation?

- Your child will need to stay in hospital after surgery to recover. This can be for a few days but may be longer if needed. Parents can be with the child during their stay.

- We will give your child fluids through a drip into a vein. This is until they can eat food and drink. We will give them antibiotics and regular medicine for pain to make them comfortable. Your child may get an epidural or a morphine infusion. This will also let the bowel rest and start to heal.
- Your child must pee and poo after surgery and before going home. We may give some medicine to help them do this.
- Your surgeon will give you follow-up visits and reviews.
- The surgical wound will look bright pink. It should heal by itself. It will be swollen and may have a small amount of oozing.

What happens when you go home:

- Your child will be able to bathe as normal when the wound is dry.
- For more help on wound care, please search for: ‘Looking after your child’s surgical wound’ or leaflet number 335.
- Everybody heals differently. It usually takes around 6 weeks to recover from a major operation like this.
- During this time, it is important to rest and keep activities minimal to avoid putting stress on the body.

Who to contact if you have any concerns at home:

- Ward 10: **0116 258 5362**
- Your family doctor (GP) or practice nurse.
- Community nurse if you have been discharged into the care of the community nurse for dressing changes. We will give you a phone number before your child goes home.
- Please call **111** or go to A&E if you have any major concerns about your child.

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Previous reference:

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