



Syndactyly

This information sheet explains about syndactyly, how it is treated and what to expect when your child comes to Great Ormond Street Hospital for assessment and surgery.

What is syndactyly?

Syndactyly means 'joined digits' and may involve webbing of the skin, or include fusion of the underlying bones. This may be along part or the whole length of the finger. It is the second most common congenital hand problem and occurs in around 1 in 1000 births. Hand development occurs in the early stages of pregnancy and the fingers separate in the ninth week. Syndactyly happens when two or more fingers fail to completely separate during development.

Sometimes syndactyly occurs by chance or it may be inherited. In rare circumstances, it may occur along with other signs as part of a syndrome (collection of signs). Syndactyly can occur unilaterally (on one hand only) or bilaterally (affecting both hands), and can affect two or more fingers. Occasionally it may be associated with extra digits or other abnormalities in the hands.

Syndactyly can also affect the toes, involving webbing of the skin or fusion of the underlying bones along part or the whole length of the toe.

Before the operation



After the operation



Toe syndactyly



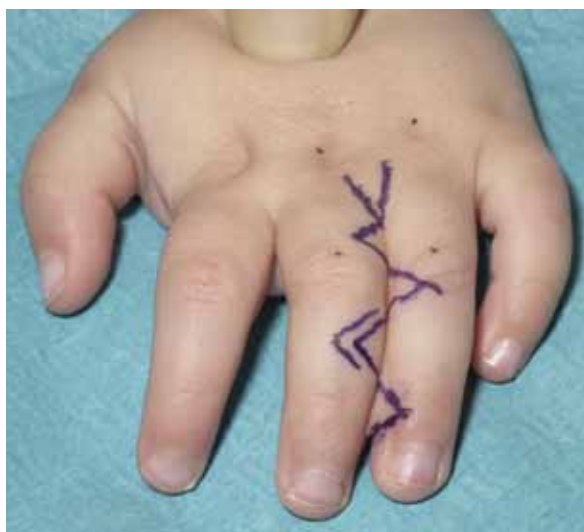
How is syndactyly treated?

It is treated surgically under a general anaesthetic. Surgery is usually only possible to one side of a finger at a time, as any damage to the blood supply on both sides could result in the loss of the finger. So, if your child has syndactyly of three or more digits next to each other, he or she will need more than one operation.

Are there any alternatives to surgery?

Surgery is the only option to separate the digits. The aim of the operation is to improve function (how well your child can use his or her hand) and sometimes appearance (how your child's hand looks). Your surgeon will advise if the benefits in your child are likely to be functional, cosmetic or both. Occasionally, some children could manage without treatment. Correction of toe syndactyly is usually for cosmetic rather than functional reasons.

Markings showing the zig zag incisions



What happens before the operation?

You and your child will need to come to a pre-admission appointment shortly before the operation is scheduled. The purpose of this is to check that your child is well enough for the operation. It is also an opportunity to meet the surgeon again and ask any questions you might have. We will give you written information about the care your child will need after the operation. We might request further x-rays or clinical photographs. At this appointment we will ask you to give permission for the operation by signing a consent form.

Operation day

On the day of the operation, you should go straight to Dinosaur ward, which is the same day admit unit at GOSH. The nurses will check that your child is well and ask you to complete some forms if you have not filled them in previously. When the operating theatre is ready, you and your child will be collected and taken there by a member of staff. You will be able to stay with your child until he or she has had the general anaesthetic and then you will be taken to your child's post-operative ward.



What does the operation involve?

The surgeon will recreate a new web with local flaps of skin from the sides of the digits. This usually involves making a series of zig-zag incisions along the digits, wrapping the zig-zag pieces of skin to cover up the inside surface of the digits where they were previously joined. This means that skin from the palm of the hand may end up on the back of the finger and vice versa. If a child's palm is much lighter in colour than the back of the hand, this will be noticeable after the operation. In most cases, the surgeon will need to use a skin graft to cover up any gaps. The skin for the graft is usually taken from the groin area, so that any scar is hidden in a natural skin crease. This will be a different colour on the hand than the rest of the skin. Occasionally, a skin graft will not be needed.

Markings showing the zig zag incisions



The operation lasts about three hours. Your child will be away from the ward for about one extra hour to give time to prepare for the operation, and to recover from the anaesthetic afterwards. The nurses will tell you when your child is in the recovery area and take you there.

Are there any risks?

Around 150 major hand operations (including syndactyly repair) are carried out at GOSH each year and our surgeons are very experienced so will minimise the chance of any problems developing.

As with all surgery, there is a risk of bleeding but the surgeon uses a tourniquet to reduce blood flow to the operation site, so there is rarely any serious blood loss. There is a risk of infection as the skin is opened, but your child will be given antibiotics to reduce the risk of this. If an infection does occur, it is usually minor and easily treated with a course of antibiotics.

There is a chance that the skin graft will not 'take' but looking after it carefully will help the operation site to heal as well as possible. Any infection or graft loss may affect the time the wounds take to heal and therefore the resulting scars. The amount of scarring varies from child to child. If your child tends to scar easily from cuts and grazes, it is likely that he or she will have noticeable scars after the operation, but these will fade in time. If scarring is poor, then repeat surgery may be required when your child is older. A second operation might also be needed if the scar does not stretch as well as the normal skin as your child grows.

There is a very small risk of nerve injury or of loss of the blood supply to the digit but this is very rare with experienced surgeons.



What happens after the operation?

Your child will come back to the post-operative ward to recover. Usually this is Peter Pan Ward and more information about the ward is available in our booklet. Your child will have had pain relief in theatre but when this wears off, pain relief will be given in the form of medicines to be swallowed.

His or her hand or foot will be covered in a large bandage to protect the skin grafts while they heal. Your child will soon find a way to use his or her bandaged hand or foot in everyday activities. It is best to keep the limb operated on raised above the level of the heart as much as possible to reduce any swelling, which in turn reduces any pain. It also minimises any oozing under the flaps and skin grafts. Your child's limb may be raised using pillows, soft toys or the hand may be placed in a sling when sitting or walking around.

If your child's fingertips or toes are visible, the ward nursing staff will check them on a regular basis for warmth, colour, sensation, movement and blood flow. These checks show that the blood is flowing properly. If your child's digits are not visible, this means that the surgeon was satisfied that the blood was flowing properly at the end of the operation.

Your child should be able to go home the day after the operation. He or she will have been given pain-relief while in hospital, but you will need to continue giving this at home for at least three days. As well as medicine, distracting your child by playing games, watching TV and reading together can also take his or her mind off the pain.

The clinical nurse specialists will give you information about looking after your child's hand or foot at home, particularly keeping the hand dry and raised above the level of the heart.

When you get home

You should call us if:

- Your child has a temperature of more than 37.5°C
- You can see swelling or redness near the bandage
- There is staining coming from inside the bandage
- Your child complains of a tingling feeling under the bandage
- There is an unpleasant smell coming from the bandage
- your child is in a lot of pain and pain relief does not seem to help

Dressing changes

Your child will need to keep his or her hand or foot bandaged until the wounds have healed completely, which usually takes four to six weeks.

If your child has had a skin graft, the first bandage change will be done while he or she is under general anaesthetic. This is to prevent the dressing change being too painful and to assess the skin graft properly. The first bandage change is usually done on a day case basis, so you come into hospital and return home the same day. If your child has not had a skin graft, or when the skin graft is stable, your child will have the bandage changes done during a ward visit.



Once your child's hand has healed completely, it will no longer require a bandage. Your child will be able to have a bath or shower again, and also go swimming.

The team will review your child about three months after the operation during an outpatient appointment. This will give them the opportunity to assess your child's progress and plan any further operations, if they are needed. If your child does not need any further operations, the consultant will see your child at an outpatient appointment about one year later.

Your child will then have regular outpatient appointments to check his or her progress until they have finished growing. As children continue to grow, your child may need a second operation later on. This is usually the case with about 1 in 10 children overall but in some cases is more likely.

What is the outlook for children with syndactyly?

This depends on the degree of syndactyly and whether it occurred by chance or as part of a syndrome. The outlook for children with simple syndactyly is usually excellent. If the syndactyly occurred as part of a syndrome, the outlook depends on the particular syndrome and associated features.

Is there a support group?

Yes, you can contact REACH, which is a support group for children with all sorts of arm and hand problems. You can contact them as follows:

'Reach'
25 High Street
Wellingborough NN8 4JZ
Tel: 01933 274126
Email: reach@reach.org.uk
Web Site: www.reach.org.uk

Notes

**If you have any questions, please ring the clinical nurse specialists
on 020 7405 9200 ext 5057 or bleep 0302.
Out of hours, please contact Peter Pan Ward on 020 7829 8825.**

Compiled by the Hand Surgery team in the Department of Plastic Surgery
in collaboration with the Child and Family Information Group

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