

Pediatric Hand and Foot Surgery

Dr. Stelnicki has treated thousands of babies and children with hand and feet problems ranging from very simple to highly complex cases. He implements the most advanced techniques in the operating room and will provide your family with the best diagnosis and treatment plan individualized for your child's special case.

Conditions treated:

- Syndactyly
- Polydactyly
- Duplicate thumb
- Clinodactyly
- Brachydactyly
- Camptodactyly
- Scar contractures
- Trigger fingers
- Ganglion cysts
- Amniotic band syndrome
- Fractures
- Crush injuries
- Tumors

What is syndactyly?

Syndactyly is a condition present at birth meaning the digits (fingers or toes) are webbed or joined. It occurs in about 1 in every 3000 newborns. It is more common in boys than in girls and more common in Caucasians. Syndactyly is present in both hands/feet half of the time. The most common presentation is the joining of the middle and ring finger.

What is the cause of syndactyly?

Syndactyly occurs in utero during fetal development. Normally, the initial hand or foot structure is formed in the shape of a paddle and at approximately the sixth week it separates into individual fingers. Syndactyly results when this process fails to happen.

Syndactyly may run in the family (approximately 20% of cases) or occur sporadically. Mostly, the condition is a sporadic, isolated incident in an otherwise healthy child. Sometimes, syndactyly may be apart of a genetic syndrome (such as Apert or Poland syndromes).

Are there different forms of syndactyly?

There are many different presentations of syndactyly. It can range from an incomplete fusion (digits are partially joined) to a complete fusion (digits are joined all the way to the tip).

There may be a simple fusion (the digits are only joined by soft tissue), a complex fusion (the digits are joined by soft tissue, muscle, nerves, cartilage and/or bone), or a complicated fusion (the digits are joined by complex structures but are also abnormally shaped or joined).

How is syndactyly diagnosed?

Syndactyly may be diagnosed prenatally via ultrasound. Otherwise, it is diagnosed at birth. Sometimes xrays may be ordered to determine involvement of the underlying bone structure.

How is syndactyly treated?

Syndactyly is treated with surgery. Surgery may be performed at any age but is commonly treated before the first year of life. More than one surgical procedure may be needed in order to not compromise blood supply.

What is the prognosis for syndactyly?

Most patients after surgery have completely restored appearance, function, and form of their digits, hands, and/or feet. If necessary, physical therapy may be prescribed in order to aid in the healing process. Sometimes, additional surgeries are needed in order to complete the treatment.

What should be expected after the surgery?

Post-operatively, a soft cast or splint may need to be worn for the first week or two after surgery. This is worn in order to protect and immobilize hand/foot movement in order for the healing process to occur. It is important that this cast be kept clean, dry, and intact for the first 72 hours following surgery. Under the cast, stitches may be present and are typically the dissolvable type. The stitches may be removed or trimmed at the post-operative visits. For the following month, dressings may be worn in order to keep the digits separate.

Complications are uncommon after syndactyly repair. But the most frequent complications after surgery include recurrence of the syndactyly (referred to as web space creep) and scar contracture (scar tissue formation).

What is the prognosis for polydactyly?

Most patients after surgery have completely restored appearance, function, and form of their digits, hands, and/or feet. If necessary, physical therapy may be prescribed in order to aid in the healing process. Sometimes, additional surgeries are needed in order to complete the treatment.

What is polydactyly?

Polydactyly is a condition present at birth meaning the presence of extra digits (fingers or toes). It occurs in about 1 in every 1000 newborns. It is more common in boys than in girls and more common in Caucasians. Polydactyly is usually present in just one hand or foot. The most common presentation is an extra finger on the pinkie finger side in the Black population.

Are there different forms of polydactyly?

The extra digit may be present at the side of the first digit (thumb), fifth digit (pinkie finger), or in the middle of the hand or foot. Typically, these digits are smaller and abnormal in appearance and function. The extra digit may be connected by as little as skin or as much bone.

What is the cause of polydactyly?

Polydactyly occurs in utero during fetal development. Normally, the initial hand or foot structure is formed in the shape of a paddle and at approximately the sixth week it

separates into individual fingers. Polydactyly results when this process fails to happen normally and a single digit splits and develops in two.

Polydactyly may run in the family (approximately 20% of cases) or occur sporadically. Mostly, the condition is a sporadic, isolated incident in an otherwise healthy child. Sometimes, polydactyly may be a part of a genetic syndrome.

How is polydactyly diagnosed?

Polydactyly may be diagnosed prenatally via ultrasound. Otherwise, it is diagnosed at birth. Sometimes xrays may be ordered to determine involvement of the underlying bone structure.

How is polydactyly treated?

Polydactyly is treated with surgery. Surgery may be performed at any age but is commonly treated before the first year of life. The surgery may be very simple or more complex depending on the involvement of the underlying bone, muscle, and nerve structures.

What should be expected after the surgery?

Post-operatively, a few bandages may be placed or a soft cast or splint may need to be worn for the first week or two after surgery. This is worn in order to protect and immobilize hand/foot movement in order for the healing process to occur. It is important that this dressing be kept clean, dry, and intact for the first 72 hours following surgery. Under the dressing, stitches may be present and are typically the dissolvable type. The stitches may be removed or trimmed at the post-operative visits. Sometimes, a Band-Aid may need to be worn after the stitches are removed.

Complications are rare after polydactyly repair. The most frequent complications after surgery include scarring or infection at the surgical site.