



DEPARTMENT OF PLASTIC SURGERY HAND CLINIC: SYNDACTYLY

The Department of Plastic Surgery at Children's Hospital Boston provides a wide variety of comprehensive reconstructive and cosmetic surgical treatments for children with various craniofacial anomalies, vascular anomalies and congenital hand defects. Patients from around the world are referred to Children's Department of Plastic Surgery for state-of-the-art treatment approaches and methods. With our affiliation with Brigham and Women's Hospital, the Department of Plastic Surgery continues to care for young adults and adult patients.

Children's Hand Clinic specializes in the evaluation and treatment of congenital and acquired hand problems. Some of the conditions that we treat include arthritic conditions, traumatic injuries, sport injuries, fractures, sprains, and dislocations. We also specialize in treating congenital anomalies, including syndactyly (webbed fingers), polydactyly (extra fingers), club hand, finger or hand size anomalies, and vascular malformations.

Syndactyly

Syndactyly is a term used to describe webbed or conjoined fingers. In general, syndactyly is classified as complete (fingers that are joined all the way to the finger tips) or incomplete (fingers that are joined only part way up the fingers). Additionally, syndactyly is classified as simple (fingers that are joined by skin and soft tissue only) or complex (fingers in which underlying bones are also joined together). Some patients may also have a "complicated" syndactyly that involves extra bones and abnormal tendon and/or ligament development.

What causes syndactyly?

During normal embryonic development, the hand initially forms in the shape of a paddle, and then eventually splits into separate fingers. Syndactyly results when one or more fingers fail to separate during this time.

Research continues into further understanding why this happens. Many cases seem to occur without an apparent cause, while some may occur due to a genetic (inherited) defect. Syndactyly may also occur as a part of an underlying hereditary syndrome.

How common is syndactyly?

Syndactyly is considered the most common congenital hand difference, occurring in approximately 1 out of every 2,500 births. It tends to occur in males more than females and in Caucasians more than people of African or Asian descent. The space between the middle and ring fingers is most commonly involved.

How is syndactyly diagnosed?

Syndactyly is diagnosed by the treating physician after a thorough medical history and careful physical examination. X-rays are often used to confirm the diagnosis and identify any underlying involvement of the bones of the fingers and hand.

How is syndactyly treated?

Syndactyly is treated by surgically separating the joined fingers. In general, the skin is split evenly between the two fingers with zig-zag incisions. Skin grafts to provide skin coverage of the newly separated fingers are usually taken from the lower abdomen and leave minimal scars. These procedures are typically performed when your child is between 12 and 18 months old. Only one side of a finger is separated at a time in order to avoid complications related to the skin coverage and blood supply of the affected finger. For this reason, if your child has multiple fingers involved more than one surgical procedure will be needed.

Follow-up

After surgery, your child is usually placed in an above elbow cast for three weeks to help immobilize the hand and protect the grafts. Once the cast is removed, an interdigital spacer (a splint made to slide in between the fingers and keep them apart) is used for an additional six weeks. During this time, occupational therapy (OT) to improve hand function is recommended.

We will also want to see your child for follow-up visits to ensure that healing has gone well and function has returned. In some cases, follow-up will continue for years to evaluate whether additional surgery is required to improve the function or appearance of the hand. It is important to note that some children may have "web creep", or recurrent syndactyly, if there are complications with the grafts or flaps healing.



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Board Certifications

American Board of Plastic Surgery,
American Board of Surgery,
Certificate of Added Qualification in
Hand Surgery

Specialties

Breast Surgery, Hand Surgery,
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