



DEPARTMENT OF PLASTIC SURGERY HAND CLINIC: POLYDACTYLY

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.

Polydactyly

Polydactyly is a term used to describe extra fingers and/or toes. This is a fairly common condition and often runs in families. The extra finger may be located on the thumb side of the hand (radial), the small finger side of the hand (ulnar), or in the middle of the hand (central). The extra fingers are usually smaller and abnormally developed. The extra finger can be comprised of skin and soft tissue connected to the hand by skin or can be a more fully formed finger with skeletal (bone) connections to the rest of the hand.

What causes polydactyly?

During normal embryonic development, the hand initially forms in the shape of a paddle, and then eventually splits into separate fingers. Polydactyly results when there is an error in this process and an extra finger forms after a single finger splits in two.

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. Polydactyly may also occur as a part of an underlying hereditary syndrome.

How common is polydactyly?

Polydactyly is one of the most common congenital hand differences, occurring in approximately 1 out of every 1,000 births. Usually, only one hand is affected. In the black population an extra finger on the little finger side (post-axial polydactyly) is

most common. The most common congenital hand difference in the Asian population is an extra thumb (pre-axial polydactyly).

How is polydactyly diagnosed?

Polydactyly 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 polydactyly treated?

Treatment of polydactyly can range from a simple day surgical procedure to remove the extra finger to a more complex procedure involving bone, ligament and tendon. While the treatment of polydactyly usually involves one surgical procedure, if your child undergoes a more involved surgical procedure an above-elbow cast may be necessary for three weeks and occupational therapy may be required to help manage scarring, stiffness, and swelling.

Follow-up visits may also be needed 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 as your child grows.



Brian I. Labow, MD

Assistant in Surgery (Plastic Surgery), Instructor, Harvard Medical School



Board Certifications

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

Specialties

Breast Surgery, Hand Surgery,
Microsurgery

Children's Hospital Boston

Department of Plastic Surgery, Hunnewell 1
300 Longwood Avenue
Boston, MA 02115
Phone: 617-355-4964
Fax: 617-738-1657

Other locations:

Children's Hospital Boston at Lexington

482 Bedford Street
Lexington, MA 02420
Phone: 781-672-2100
Fax: 781-672-2145