



# Hand *and* Upper Extremity Program

Department of  
Orthopaedic  
Surgery



Children's Hospital Boston

**The Hand and Upper Extremity Program, at Children's Hospital Boston, is dedicated to the comprehensive care of all upper extremity conditions in infants, children, and adolescents.**

**With over 3,000 pediatric visits each year, our team of surgeons, nurses, hand therapists and prosthetists is one of the most experienced in the country for the evaluation and care of complex congenital differences in the hand and upper extremity.**

## Diagnosis and Treatment

Patients with congenital, neuromuscular, sports-related, oncologic, and traumatic or post traumatic conditions of the upper extremity receive multi-disciplinary care involving occupational and physical therapy, splinting, casting, and reconstructive surgery.

- **Advanced techniques of fracture and microsurgical care** for complex fractures and soft tissue (skin, nerve, tendons, muscles, ligaments and blood vessel) injuries to the hand and upper extremity.
- **Post-traumatic reconstruction** of complex injuries.
- **Care for benign and malignant tumors**, of the hand and upper extremity, working closely with the Bone and Soft Tissue Tumor Program.
- **Comprehensive care for acute and chronic sports related injuries** to the hand and upper extremity.
- **Emergency and urgent care** for a wide array of complex fractures, and soft tissue injuries to the hand and upper extremity as a member of Children's Level I Trauma Center.
- **Consultation and surgical care for neuromuscular disorders** such as cerebral palsy, brachial plexus birth palsy and arthrogryposis (in conjunction with the Departments of Neurology, Neurosurgery, Physical and Occupational Therapy).

### Conditions treated include (but are not limited to):

- |                               |                              |                                |  |
|-------------------------------|------------------------------|--------------------------------|--|
| • amputations                 | • constriction band syndrome | • madelung's deformity         | • sports Injuries to the upper extremity |
| • arthrogryposis              | • dislocations               | • microvascular reconstruction | • syndactyly                             |
| • burns                       | • enchondroma                | • osteochondroma               | • symbrachydactyly                       |
| • brachial plexus birth palsy | • fractures                  | • polydactyly                  | • trigger thumb                          |
| • camptodactyly               | • free tissue transfer       | • radial and ulnar club hand   | • thumb hypoplasia/ aplasia              |
| • cerebral palsy              | • macrodactyly               | • radioulnar synostosis        | • vascular malformations/ hemangiomas    |

# Occupational Therapy

Occupational therapy helps children with upper extremity impairment and/or traumatic injuries achieve independence in all aspects of daily life. A comprehensive upper extremity evaluation may include the following assessments:

- range of motion
- sensory testing
- strength and functional testing
- self-care and play skills
- developmental assessment

In addition, evaluations prior to medical and surgical procedures are often necessary to assist with future treatment and planning.

The occupational therapist is specialized in fabricating custom pediatric splints. Occupational therapists are also skilled in making equipment adaptations and in the rehabilitation of children with neurological impairment, traumatic and congenital hand deformities.

Based on your child's needs the occupational therapist will design an individualized program which will enhance function and also improve your child's quality of life.



# Research

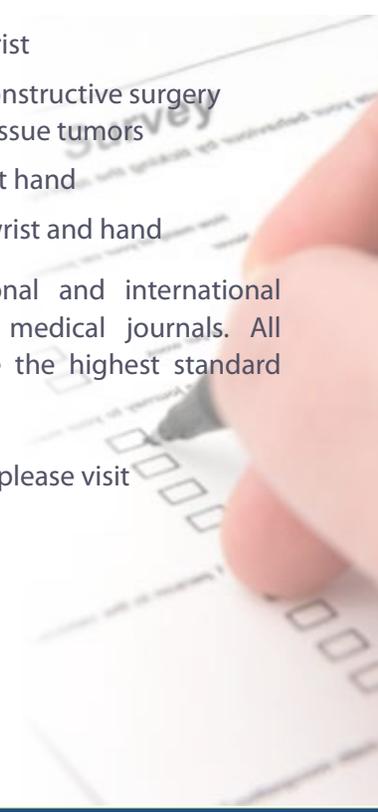
Children's Hand and Upper Extremity Program is committed in its efforts to improve clinical care through continued clinical and basic science research.

Along with its leadership in the field of brachial plexus birth palsy, the Hand and Upper Extremity Program continues to study the treatment of a wide variety of upper limb conditions, including:

- instability of the sternoclavicular and glenohumeral joints of the shoulder
- post-traumatic stiffness and deformity of the elbow
- surgical correction of forearm deformity following previous fracture
- ligament and/or cartilage injuries of the wrist
- the use of microsurgical techniques in reconstructive surgery following limb salvage for bone and soft-tissue tumors
- reconstruction of the congenitally deficient hand
- sports conditions of the shoulder, elbow, wrist and hand

These investigations have resulted in national and international presentations, and publications in leading medical journals. All research has increased our ability to provide the highest standard of patient care.

For more information on our research program please visit [www.childrenshospital.org/research/cerc](http://www.childrenshospital.org/research/cerc)



# How to Contact Us

Services are offered at our Boston, Lexington, Peabody and Waltham locations. For more information about our services or to schedule an appointment or consultation, please contact us at:

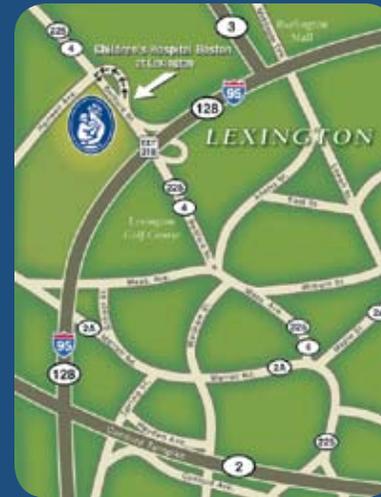
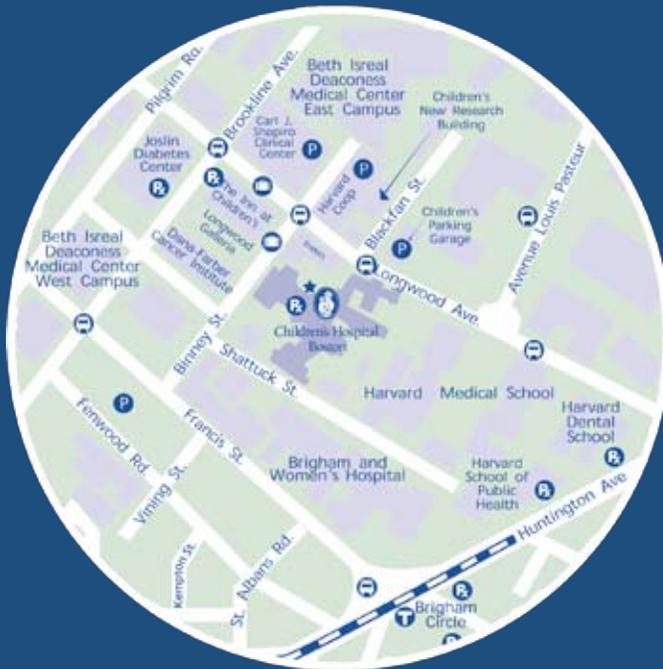
## Children's Hospital Boston

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## Children's Hospital Boston at Waltham

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