

Constraint-Induced and Bimanual Therapy for Infants

A Fairmount Rehabilitation Program at Kennedy Krieger Institute

Who We Are

The Constraint-Induced and Bimanual Therapy program for Infants uses an evidence-based understanding of the brain's natural ability to form new connections to help increase function and independence in children with hemiparesis. Our unique program combines traditional constraint-induced movement therapy with an additional period of bimanual therapy to ensure carryover of new skills.

Who We Serve

The infant program provides intensive therapy for children under two years of age with hemiparesis caused by stroke, cerebral palsy, or other conditions. Toddlers and older children can be treated in our more traditional Constraint-Induced and Bimanual Therapy program.

Our Treatment Approach

For children with hemiparesis, sometimes the greatest barrier to improvement is their almost exclusive use of their better functioning limb. To encourage use of the affected arm, the child's better functioning arm is placed in a cast, and therapy is provided to promote function of the affected limb. The casted arm is carefully monitored for proper circulation and skin integrity. A few days before the program ends, the cast is discontinued, and the child practices using both arms for everyday activities.

Therapists encourage function of the affected limb by incorporating activities of gradually increasing difficulty in play and age-appropriate activities. A great deal of positive reinforcement is given throughout the process. While the child's arm is casted, caregivers need to provide greater assistance with activities at home. Therapists teach families to help their children deal with any frustration, as well as the best ways to assist their children. To help children maintain the progress they have made during therapy, therapists work with the families to develop a customized home therapy program.



Patients are also followed after the program, as needed, to monitor the progress of therapy.

We understand that children don't all develop on the same timeline. With that in mind, the therapists will collaborate with each family to choose the most appropriate program for each child. Infants with hemiparesis treated in this program are provided one of two different treatment schedules, depending on their age and whether they are able to walk independently.

We are all born with great potential.
Shouldn't we all have the chance to achieve it?



For children who are under two years of age and walking independently:

Treatment consists of up to three hours' daily combined occupational and physical therapy for a total of 23 weekdays (about five weeks). A long-arm waterproof cast is typically worn 24 hours a day, seven days a week on the better functioning arm.

Candidates for this program must:

- Have a diagnosis of hemiplegia
- Have one clearly dominant hand that has age-appropriate function
- Be walking independently
- Be seizure-free for at least six months prior to starting therapy

This program is not appropriate for children who have:

- Severely limited movement in both arms and hands
- Contractures that would limit participation
- Self-injurious behavior
- Severe vision limitations
- An inability to follow simple commands

For children who are under two years of age and not yet walking:

Treatment consists of one hour of therapy daily, with either occupational or physical therapy for 20 days over the course of four to five weeks. A removable short-arm thermoplastic hand splint or cast is used on the better functioning arm as a constraint during therapy sessions, and for additional time at home during structured home program activities.

Candidates for this program must:

- Have a diagnosis of hemiplegia
- Be seizure-free for at least six months prior to starting therapy

"The Constraint-Induced and Bimanual Therapy program helped our family have a clearer understanding of our child's hemiplegia. Our therapist incorporated extensive knowledge and research-based information into our daughter's individualized therapy, and also gave us strategies to help her at home. We are thankful for the support and dedication provided through this program."

– Parent

Contact Information

**Constraint-Induced and Bimanual Therapy for Infants
A Fairmount Rehabilitation Program at Kennedy Krieger Institute**

For more information or to schedule an appointment, please call **443-923-4587**, or toll-free at **888-554-2080**.
TTY: 443-923-2645 or Maryland Relay **711**

KennedyKrieger.org

Physicians & Healthcare Professionals
To make a referral, call our Physician Referral Line at **443-923-9403**.

Referral specialists are available Monday through Friday from 8:30 a.m. to 5:00 p.m.

Program Location:
1750 East Fairmount Avenue
Baltimore, Maryland 21231

Kennedy Krieger Institute recognizes and respects the rights of patients and their families and treats them with courtesy and dignity. Kennedy Krieger Institute provides care that preserves cultural, psychosocial, spiritual, and personal values, beliefs, and preferences. Care is free from discrimination based on age, race, ethnicity, religion, culture, language, physical or mental disability, socioeconomic status, sex, sexual orientation, and gender identity or expression including transgender. We encourage patients and families to become active partners in their care by asking questions, seeking resources, and advocating for the services and support they need.



Learn More. Get Involved. Stay Connected. Visit KennedyKrieger.org/Connect.