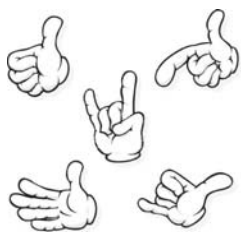


Pediatric CIMT

A constraint-induced movement therapy program for children with hemiplegia



What Is "Constraint-Induced Movement Therapy"?

In constraint-induced movement therapy (CIMT) a child's less affected or uninvolved arm and hand is placed in a constraint and restrained over a period of time. While a child wears the restraint, he/she is encouraged to use his/her affected arm and hand by doing hand training activities.

What are the Benefits?

Studies have found positive changes in arm and/or hand function in children who have participated in CIMT.

Some benefits include:

- improved quality of hand use
- new motor movements of the affected arm or hand
- more spontaneous use of the affected arm or hand

- improved hand function such as fine motor and grasp
- improved hand functioning in daily activities

What are the risks?

Associated risks reported in the literature with constraining the child's uninvolved or unaffected arm and hand include:

- some temporary loss of independence, as the child will be using the affected arm to complete daily activities
- possible increase in frustration
- possible increase in risk of falls and loss of balance as the restraint may affect posture and inability to protect themselves in a fall
- possible increase risk of injury to the involved arm and hand because the child is using the affected arm more but has decreased sensory awareness and motor control.

What constraint method will my child use?

There are several different types of constraint methods. Some options include:

- *forced-use cast* – a lightweight fibreglass cast is applied to the non-affected arm from above the elbow to just past the fingertips. The cast is on 24 hours per day for the constraint period.
- *Removable constraint*– a cotton sock with strapping, tensor wrap, mitt, or removable cast/splint, or sling is worn over the non-affected hand. The

removable constraint can be worn for up to 24 hours per day for the constraint period.

After consultation with the therapist and reviewing constraint options, the therapist and family can make a joint decision about what type of protocol and method of constraint will be the best option for the child.

The **home program** consists of principles and suggestions for age appropriate, home-based hand training activities for the parent/caregiver to do with the child for **at least 1 hour per day** (e.g. 1 hour x 1, or 30 min x 2, or 15 min x 4). Studies have shown that daily direct work on hand training of at least one hour results in greater improvement in motor skills.

How will this help my child?

The goals of this program are to:

- improve functional use of the affected arm/hand
- increase the amount of time the child uses both hands together
- provide parent education and support for continuing intervention at home