Importance of Home Therapy

It is very important to conduct therapy at home with your child following the advice given by the physical therapist. The amount of time necessary to aid in therapy gains varies. Your child’s therapist will give you recommendations for how many hours you should do home therapy. Be prepared to spend anywhere from 1 to several hours a day helping your child stretch, do functional activities, and further his or her therapy outside of the clinic. Make sure to stick to home therapy as this will aid your physical therapist very much in the clinic and will result in greater gains by your child!

Invasive Techniques

There are two often-used invasive techniques to help children with cerebral palsy, Botulinum-A Toxin injections and surgeries. Available surgeries will not be described in this brochure.

Botulinum-A Toxin Injections

What it is:
Botulinum-A Toxin causes temporary local paralysis. When injected into a spastic (rigid) muscle, it can decrease this rigidness.

What current research says:
• Temporary increased range of motion
• Temporary improvement in walking (for leg injections)
• Improvements found to last for generally 6-9 months
• For calf or hamstring injections: often increase walking ability and decrease toe walking
• Some side effects: muscle soreness, injection site pain, flu-like symptoms, and weakness

Who should use it:
• Lower level children (I-III) who have spasticity but are still able to walk (for lower body injections) or use arms (for upper body injections)

My Child Has Cerebral Palsy

A Guide to the Available Therapy Techniques
Non-Invasive Techniques

There are many therapy techniques that do not involve surgery or injections. Below you will find a handful of popular techniques and the findings of different studies pertaining to each type.

**Constraint-Induced Movement Therapy (CIMT)**

**What it is:**
Restricts the movement of the non-affected side, forcing the child to use his or her affected side to complete tasks.

**What current research says:**
- Motor performance and daily function can improve
- For upper body: shorter reaction after therapy
- More normalized movements after therapy
- Better control of affected arm
- Increased self-care (lessened need for help from others)

**Who should use it:**
Individuals with one-sided effects (unilateral spasticity)

**Neruodevelopment/Bobath Therapy (NDT)**

**What it is:**
Therapy focused on improving posture and body positioning to aid in getting your child moving in a “normal” and functional way.

**What current research says:**
- Differing results. Some research finds an improvement in functional movements while other research does not.
- Has been shown to improve posture and stability

**Who should use it:**
NDT has been suggested for all cerebral palsy levels.

**Aerobic Exercise, Strength Training, and & General Activeness**

**What current research says:**
- Exercise that increases the heart rate has been found to improve fitness.
- Prevention of further muscular injuries
- Possible improvements in cognitive, social, and emotional development
- Aids in the maintenance of strength
- Increased independence and confidence
- Strength training is not meant for long-term repetitive use.

**Hand-arm Bimanual Intensive Therapy (HABIT)**

**What it is:**
Focus is on two-sided gradual functional activity for therapy. There is no restriction to the affected side.

**What current research says:**
- Improved self-care
- Improved independence
- Parents felt their children improved in performance better than CIMT in one study
- 90 hours was enough to improve independence

**Who should use it:**
Shown to be effective with hemiplagia (one-sided) cerebral palsy