

TheraSuit Method® was created by Izabela and Richard Koscielny (Physical Therapists and parents of a daughter with Cerebral Palsy). It is a very holistic approach to treatment for those afflicted with neurological disorders like Cerebral Palsy, Developmental Delays, and Traumatic Brain Injuries. It combines the best elements of various techniques and methods, and has a sound rationale based on physiology of exercises.

The key element is a strengthening program established for the participant based on his/her individual needs, strengths and weaknesses. Increased strength reflects in daily functional activities that usually follow or are combined with the strengthening exercises.

TheraSuit Method® is based on an intensive and specific exercise program. Elimination of pathological reflexes and establishing new, correct, and functional patterns of movements is of significant importance.

TheraSuit Method® utilizes various tools and [exercises](#). One of them is the soft dynamic proprioceptive orthosis called TheraSuit®. TheraSuit® aligns the body as close to normal as possible. Reestablishing the correct postural alignment plays a crucial role in normalizing muscle tone, sensory and vestibular function.

Universal Exercise Unit is used to train one the abilities to isolate the desired movements and strengthen the muscle groups responsible for that movement. Universal Exercise Unit allows to gain range of motion, muscle and joint flexibility, as well as functional skills.

TheraSuit Method® is a structured [program](#) that enhances growth and



## II. How does the TheraSuit works?

TheraSuit, thanks to its construction and improvements creates a breathable soft dynamic orthotic. Its major goal is to improve and change proprioception (pressure from the joints, ligaments, muscles), reduce patient's pathological reflexes, restore physiological muscle synergies (proper patterns of movement) and load the entire body with weight (process similar to a reaction of our muscles to the gravitational forces acting up us for 24 hours). All of the above normalizes afferent vestibulo-proprioceptive input (information arriving to the vestibular system). The vestibular system is a very important center. It processes, integrates and sends back all the information that arrives from muscles, joints, tendons etc. It influences muscle tone, balance and the position of the body in space.

The more correct proprioception from the joints, ligaments, muscles, tendons, joint's capsule etc., the more correct alignment. The vicious cycle (picture 1) can be interrupted and incorrect information is replaced by " new" correct information (picture 2). A patient (child) diagnosed with Cerebral Palsy and other neuro-motor disorders requires hundreds of repetitions of any particular movement. We believe that as individuals, we all have a "magic" number. For example: a baby that is trying to push-off the floor will need to repeat this movement a few hundred times in order to master it. Another one may need either more or less repetitions to learn the same skill. For the Cerebral Palsied child however, this fairly low "magic" number grows to a thousand or more repetitions to learn and master new skills. TheraSuit worn over a prolonged time will correct proprioception and accelerate the progress. Thanks to the TheraSuit and physical movement (therapy) the skills practiced will become more fluent and require less and less effort. Therefore, TheraSuit facilitates the development of new gross and fine motor skills like sitting, standing, walking.



**Indications:**

- Cerebral Palsy
- Developmental delays
- Traumatic Brain Injury
- Post stroke (CVA)

- Ataxia
- Athetosis
- Spasticity (increased muscle tone)
- Hypotonia (low muscle tone)

**Contraindications:**

- hip subluxation greater than 50%
- severe scoliosis

**Precautions:**

- heart conditions
- uncontrolled seizure activities
- hip subluxation
- hydrocephalus (VP shunt)
- diabetes
- kidney problems
- high blood pressure

TheraSuit consists of :

- cap
- vest
- shorts
- knee pads
- arm attachments - new - (available in 2009)
- shoe attachments

All the mentioned above elements of the suit are connected with each other through a system of elastic bands.

**TheraSuit comes in 6 sizes:**

- |                          |                                     |
|--------------------------|-------------------------------------|
| • x-small (yellow/red)   | 2.5 years and older, below 34" tall |
| • small (yellow)         | 3-5 years old, 34" - 44" tall       |
| • medium (red)           | 5-8 years old, 44" - 51" tall       |
| • large (green)          | 8-12 years old, 51" - 56" tall      |
| • x-large (blue)         | 12 - adulthood, 56" - 66" tall      |
| • xx-large (blue/yellow) | adults                              |

Picture 1

Picture 2



## Benefits:

- Re-trains central nervous system
- Restores ontogenic development
- Provides external stabilization
- Normalizes muscle tone
- Aligns the body to as close to normal as possible
- Provides dynamic correction
- Normalizes (corrects) gait pattern
- Provides tactile stimulation
- Influences the vestibular system
- Improves balance
- Improves coordination
- Decreases uncontrolled movements in ataxia and athetosis
- Improves body and spatial awareness
- Supports weak muscles
- Provides resistance to strong muscles to further enhance strengthening
- Improves speech production and its fluency through head control and trunk support
- Promotes development of both fine and gross motor skills
- Improves bone density
- Helps to decrease contractures
- Helps improve hip alignment through vertical loading over the hip joint

[Movies](#) / [Research](#) / [Articles](#) / [Pictures Gallery I](#) / [Pictures Gallery II](#) / [Program](#) / <http://www.youtube.com/suittherapy>

- \*Therapy programs provided in the Centers using TheraSuit may vary.
- \*Therasuit LLC and their representatives are not affiliated with any of the clinics.
- \*Therasuit LLC offers equipment registered and listed by the FDA.
- \*TheraSuit received "Safe for Children" Certificate and CE Mark in European Union.
- \*TheraSuit United States Patent # US 7,153,246
- \*TheraSuit International Patent PCT/US2008/051458

development of each individual.