

The Benefits of Intensive Pediatric Physical Therapy -by **Monica Aalbers, PT**

Certain experiences in life often direct one's path. This was the case for me during one of my clinical rotations. As a physical therapy student, I was fortunate to be assigned a pediatric clinical rotation in Decorah, Iowa; it is here where I had my first exposure to intensive pediatric physical therapy. After seeing such amazing life changing results, I knew in my heart that if I were to continue to pursue pediatric physical therapy that I would want to be certified in this method of treatment.

To better understand the purpose of intensive pediatric therapy, it is important to appreciate the difference between traditional and intensive pediatric therapy. Traditional pediatric physical therapy is 1-4x per month for 30 to 45 minutes, depending on the child's specific needs. There is definite benefit from this type of therapy; it serves an important purpose for many children. In contrast, intensive pediatric physical therapy consists of daily therapy for 3+ hours per day for 2-3 consecutive weeks. This is then enhanced with a home program and weekly therapy if possible. The intensive program is often repeated at 6 -12 month intervals as allowed by insurance, personal finance, and schedules.

So why intensive therapy? Some may think it is too strenuous for a young child to undergo that much therapy. However, the families who have selected this approach often find that their child can make more progress in 3 weeks of intensive than 6 months of traditional therapy. Intensive therapy works because it provides the appropriate volume of repetition to gain new skills. If you have ever watched a baby learn a new skill (self-feeding, sitting, standing, walking, etc), you quickly learn that it takes the child hundreds of repetitions to learn a new skill. This still applies to us as adults; if we want to learn a new skill such as golf, we don't just step on the course and excel, but rather it takes hundreds of repetitions to become a skilled golfer. This is assuming the individual has a normal nervous system. Most children with special abilities have nervous systems that do not communicate as efficiently and effectively as a normal nervous system. Therefore, they require additional volume of repetition to master a new skill. The 10-15 hours of therapy per week allow more time for more repetition.

Intensive physical therapy often includes more than just high volume of training; it includes special equipment. The "spider cage" uses a harness and bungees to help support the child so the therapist can use his/her hands to help create proper movement patterns. The spider cage also provides opportunities for children to gain strength by isolating individual muscles in specific positions using weights and pulleys. The cage also has an attached railing on the ceiling that allows children to have partial support while learning to crawl or take steps. The Therasuit is a "dynamic orthotic" – which is a custom suit with hooks. Based on the child's needs, the therapist will attach bungees to provide support and/or resistance. The Therasuit can also assist with alignment and correct positioning. After applying the suit, the therapist will take the child through movements like sitting, squatting, lunging, walking, etc as the bungees can serve as resistance to those movements, which ultimately builds strength for those skills. On an interesting side note, the Therasuit was patented by a European therapist who has a daughter with cerebral palsy. The idea was inspired from a concept from aerospace engineers who designed a compression suit for astronauts to wear in space to avoid loss of bone density. The pressure from the suit would load the astronauts bones similar to what gravity would do on earth.

Many children can benefit from intensive physical therapy. I have worked with children age 2-18 using this method. Common reasons for using intensive therapy include but are not limited to the following: post-stroke, post traumatic brain injury, cerebral palsy, spina bifida, neurological disorders, genetic conditions, down syndrome, and sensory processing disorder.