



LEG PROSTHESIS AND DCD

Jimmy Eggleston, eldest son of Pediatrician Dr. Katherine Eggleston, was born without his right leg below the knee, dislocated hips, and no ligaments in his left knee. He was eight years old and suffered severe Developmental Coordination Disorder when he began Interactive Metronome Training.

Jimmy also suffered from severe motor skill, coordination and balance impairments, and could only go a few steps without falling. With the help of prostheses and a walker, Jimmy was able to move about awkwardly.



Jimmy's pre-therapy IM Test Battery confirmed that there was a major difference between his neural control over his upper and lower body parts. He had a 110-millisecond offset with his arms, within normal range for a seven year old. However, his repeated earliest learning experiences with his legs had developed some bad neural control habits. His control over his left leg was 350 ms, and his right leg and prostheses accuracy was above 500 ms.

With such poor neural control accuracy over his legs and prostheses, Jimmy was unable to coordinate the timing of his leg placement and the shifting of his weight. Not only did it prevent him from developing a consistent gait when walking, when he shifted his weight, his forward leg wasn't there to catch him. As a result, he fell often.

Jimmy was very determined and immediately seemed to enjoy the upper body IM Training. He quickly learned how to focus his concentration while he was doing upper body IM Training exercises. During the first three sessions, he achieved exceptional improvements in his upper body accuracy, lowering his score from 110 ms to 44 ms accuracy.

Especially when working with his legs, Jimmy frustrated easily. On several occasions, he kicked the floor trigger out of frustration for his lack of balance. During his third IM Training, session Jimmy had a major breakthrough with the control of his prostheses and his attitude immediately changed. His lower body accuracy quickly improved to less than 200 ms. Just when he was beginning to show dramatic improvements, the therapy was unavoidably interrupted.

After a three-month delay, therapy resumed. Prior to beginning his fourth therapy session, Jimmy was retested and his millisecond timing was within 10 ms of where he left off three months earlier...thus he had retained the improvements that he achieved in his first three sessions.



In just six additional sessions, Jimmy gained remarkable control over his hands, lowering his score to less than 30 ms off the reference beat. Unconsciously, utilizing the IM guidance sounds, he quickly learned to tap his feet without holding on to anything to maintain balance and improved his leg control to under 80 ms. He developed the ability to plant his forward foot and shift his weight right on the IM's reference beat, while walking back and forth across the basement.

Shortly thereafter, he began to smooth his leg motions, gain control of his prostheses, and maintain his balance for extended periods. Having Jimmy walk with the beat quickly resulted in a more stable and normal looking gait.



The results from Jimmy's therapy made apparent that he had gifted control over his hands. Discovering this gift dramatically improved his self-image and will likely influence his future education and career choices. Jimmy's mother had him independently tested to determine the effects the changing sounds of the Interactive Metronome had on his auditory processing abilities. To her surprise, he tested at the 12-year old level— four years ahead of his chronological age group!

Jimmy, upon completing IM Training, immediately began playing basketball, football, soccer and other sports with his brothers. For the first time, he was able to move about confidently and have smooth control.

*For more information regarding Interactive Metronome therapy and other chiropractic neurological therapies for disorders such as ADD (Attention Deficit Disorder), ADHD (Attention Deficit Hyperactivity Disorder), PDD (Pervasive Developmental Disorder), OCD (Obsessive-Compulsive Disorder), Tourette's Syndrome, Asperger's Syndrome and Autism, please call **631-265-1223** or visit: www.newlifechiropractic.com.*