

The Interactive Metronome & Autism

By LorRainne Jones, PhD, MA, CCC-SLP

The Interactive Metronome (IM) has been shown to help children with motor planning and sequencing challenges. Many children diagnosed with developmental and learning disorders, including Autism Spectrum Disorder (ASD), evidence significant motor planning and sequencing problems. This advanced brain-based treatment program was developed to improve the processing abilities that affect attention, motor planning and sequencing. This, in turn, strengthens motor skills, including fine and gross motor function, mobility, and many fundamental cognitive capacities such as planning, organizing and language.

Therapists and physicians understand the correlation between the neurological functions of motor planning and sequencing and the critical aspects of human development, such as basic thinking, organizing, language processing, academic achievement, and coordination. When a child or adult demonstrates a deficit in motor planning and sequencing, it is typically accompanied by problems in learning, coordination, or behavioural control.

Prior to the development of Interactive Metronome, Inc. (IM), therapists were able to identify patients with these difficulties, but there was no system for measurable assessment and improvement. Today we know how to measure a child's motor planning and sequencing abilities, and we can show functional improvements in a short period of time.

According to Stanley I. Greenspan, MD, Chair of the Scientific Advisory Board of the Interactive Metronome and a noted child psychiatrist, the Interactive Metronome (IM) may benefit children with motor planning and sequencing challenges and, therefore, should be considered as part of a comprehensive program for children with developmental, learning, and attention problems that involve this underlying difficulty, such as Autism Spectrum Disorder, and who are able to collaborate in the IM training program. The reason for this is that IM training focuses on and improves rhythmicity and timing—critical foundations in learning to plan and sequence actions and thoughts.

Over the course of the treatment, patients learn to:

- Focus and attend for longer periods of time
- Increase physical endurance and stamina
- Filter out internal and external distractions
- Improve fine and gross motor function
- Improve their ability to monitor mental and physical actions as they are occurring
- Progressively improve performance.

Case Study

“Anna” had been diagnosed with PDD/autism, auditory processing disorder, and sensory motor dysfunction. She had receptive and expressive language deficits, auditory hypersensitivity, abnormal vocal prosody, motor planning deficits, poor limb coordination, impulsivity, distractibility, tactile defensiveness, and anxiety. She was home schooled and had been receiving both speech and occupational therapy since she was years old. At age 12, LorRainne Jones, Ph.D., CCC-SLP from Kid-Pro Therapy Services in Tampa, Florida decided to try Interactive Metronome (IM) therapy with Anna.

Three times a week Anna came to Kid Pro-Therapy Services to do IM. During the treatment, Anna stood in front of a computer while wearing headphones, a hand sensor and a foot sensor. She heard auditory guide sounds through her headphones and was prompted to match the metronome beat with various hand and foot movements. The sensors measured to the millisecond how close Anna was to the beat. Each session, IM became a little more challenging, improving Anna's mental capacities and endurance. The program was engaging and encouraged Anna to perform better each time.

After just 9 weeks, Anna completed 25 sessions of IM. Dr. Jones administered subtests of the Comprehensive Assessment of Spoken Language, including Antonyms, Grammatical Morphemes, Sentence Comprehension, Nonliteral Language, Idiomatic Language, Pragmatic Judgment and Inference, and noted Anna made gains on every test.

Following IM treatment, reports were made of increased attending, improved concentration, “more talkative, more engaged” (parent report), improved



conversational skills, improved balance and coordination, decreased tactile defensiveness, improved processing, and improved sleeping patterns. Her voice was no longer monotone and she improved her prosody of speech, resulting in a more natural sounding voice.

“IM is an important therapeutic tool for use with children and adults with motor planning challenges. For many of my patients, IM is where we begin treatment. I would strongly encourage health care providers who do work with people with autism to become knowledgeable about IM and become certified IM providers so that they may consider this important therapeutic program, when appropriate, as part of a comprehensive intervention plan,” says Dr. Jones.

For more information about the Interactive Metronome, go to:

www.interactivemetronome.ie

Or contact ATLAS Training on:

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